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The Environmental Assessment and Management (TEAM) Guide: South Dakota Supplement

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October 2005
Revised February 2010

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Final report

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Abstract: Environmental assessments help determine compliance with current environmental regulations. The U.S. Air Force, U.S. Army, Defense Logistics Agency (DLA), and Corps of Engineers (Civil Works) have adopted environmental compliance programs that identify compliance problems before they are cited as violations by the U.S. Environmental Protection Agency.

Since 1984, the U.S. Army Construction Engineering Research Laboratory, in cooperation with numerous Department of Defense (DOD) components, has developed environmental compliance assessment checklist manuals. The Environmental Assessment and Management (TEAM) Guide was developed for use by all DOD components. Currently there are five participating DOD components: the Air Force, Air National Guard, Army, Civil Works, and DLA. These agencies have agreed to share the development and maintenance of this Guide.

The Guide combines Code of Federal Regulations and management practices into a series of checklists that show legal requirements and the specific operations or items to review. TEAM Guide is supplemented by DOD component-specific manuals detailing DOD component regulations and policies. The South Dakota Supplement was developed to be used in conjunction with the TEAM Guide, using existing South Dakota state environmental legislation and regulations as well as suggested management practices.

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FOREWORD

This is ERDC/CERL SR-05-36. The report is based on the information available on Enflex Federal and State Regulations of 1 February 2010.

The research was performed for AEC MIPR 0010005589, technical monitor Mark DItmore; ANG MIPR F9WFEV0028G001, technical monitor is Chuck Smith; AGB W45XMA00130245, technical monitor is Phil Dao; Army Reserve MIPR10CODCD201, technical monitor is Roc Tschirhart; Commerce MIPR 1301-09-SA00110, technical monitor is Greg Falzetta; USACE Fund account 96x3123, technical monitor is John Coho; DHS IAG HSHQDC-08-X-00456, technical monitor is Peter Wixted; DLA MIPR SP1001090, technical monitor is Pam Hillis; USPS MOA-05-CERL-01, technical monitor is Sharon Marsh; and, State Department IAG F3NF369350G002, technical monitor is Janice Smith.

The research was performed by the Business Processes Branch (CN-B), Installations Division (CN), of the U.S. Army Construction Engineering Research Laboratory (CERL). The CERL Principal Investigator is Carolyn O'Rourke. The CERL Researcher is Patricia Kemme. Ms. Michelle Hanson is Branch Chief, CN-B, and Mr. John Bandy is Division Chief, CN. Dr. Ilker Adiguzel is Director of CERL.

CERL is an element of the U.S. Army Engineer Research and Development Center (ERDC), U.S. Army Corps of Engineers. The Director of ERDC is Dr. James R. Houston, and the Commander is COL Gary Johnson.

NOTICE

This manual is intended as general guidance for personnel at Federal facilities. It is not, nor is it intended to be, a complete treatise on environmental laws and regulations. Neither the U.S. Government nor any agency thereof, nor any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information contained herein. For any specific questions about, or interpretations of, the legal references herein, consult appropriate legal counsel.

Comment Form

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Page #	Checklist item #	Line #	Comments

SECTION 1

AIR EMISSIONS MANAGEMENT

South Dakota Supplement, February 2010

This section covers the state requirements for Air Emissions Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Definitions

- *Act* - chapter 34A-1 of the South Dakota Codified Laws (SDAR 74:36:01:01).
- *Affected Source* - a source that includes one or more affected units under Title IV of the Clean Air Act (SDAR 74:36:01:01).
- *Affected Unit* - a unit that is subject to any of the emission reduction requirements or emission limits pursuant to Title IV of the Clean Air Act or SDAR 74:36:16 (SDAR 74:36:01:01).
- *Air Pollutant* - one or a combination of the regulated air pollutants listed as follows (SDAR 74:36:01:01 and 74:36:01:15):
 1. nitrogen oxides or any VOCs
 2. nitrogen dioxide, PM₁₀, sulfur dioxide, carbon monoxide, lead, ozone, or any pollutant for which a national ambient air quality standard has been promulgated in the Clean Air Act
 3. any pollutant that is addressed by any standard promulgated under 111 of the Clean Air Act
 4. any Class I or II substance subject to a standard promulgated under or established by Title VI of the Clean Air Act
 5. any pollutant subject to a standard promulgated under 112 of the Clean Air Act or other requirements established under 112(g), (j), and (r) of the Clean Air Act, including the following:
 - a. any pollutant subject to a standard promulgated under 112(j) of the Clean Air Act. If the administrator of the USEPA fails to promulgate a standard by the date established in 112(e) of the Clean Air Act, any pollutant for which a subject source would be major shall be considered to be regulated on that date
 - b. any pollutant for which the requirements of 112(g)(2) of the Clean Air Act have been met, but only for the individual source subject to 112(g)(2) requirement.
- *Allowable Emissions* - the emission rate calculated using the maximum rated capacity of a source unless the source is subject to federally enforceable limits which restrict operating rate, hours of operation, or both, and the most stringent of the following (SDAR 74:36:01:01) [Revised February 2000]:
 1. the applicable new source performance standards in SDAR 74:36:07
 2. the applicable national emission standards in SDAR 74:36:08
 3. any applicable emission limitations specified in this article, including those with a future compliance date
 4. the emission rate specified as a permit condition
 5. the applicable standards in 40 CFR 60, 61 or 63 (1 July 1997).
- *Ambient Air* - that portion of the atmosphere external to buildings to which the general public has access (SDAR 74:36:01:01).
- *Board* - the Board of Minerals and Environment (SDAR 74:36:01:01) [Added February 2007].
- *Department* - the South Dakota Department of Environment and Natural Resources (SDAR 74:36:01:01) [Added February 2007].

- *Emission Standard* - the maximum amount of a pollutant legally permitted to be discharged from a single unit (SDAR 74:36:01:01).
- *Emission Unit* - any part of a stationary source that emits or has the potential to emit a pollutant regulated under the Act (SDAR 74:36:01:01).
- *Existing Municipal Solid Waste Landfill* - a municipal solid waste landfill that commenced construction, reconstruction or modification before May 30, 1991. An existing municipal solid waste landfill may be active or closed. Physical or operational changes made to an existing municipal solid waste landfill solely to comply with applicable emission limits are not considered a modification or reconstruction (SDAR 74:36:01:19) [Added April 1998].
- *Existing Source* - that has an approved state-issued variance or permit (SDAR 74:36:01:01) [Revised March 2005].
- *Facility* - a building, structure, or installation of pollutant-emitting activities that belong to the same industrial grouping, located on one or more contiguous or adjacent properties and under the control of the same person or of persons under common control, except the activities of a water-borne vessel. Pollutant-emitting activities are part of the same industrial grouping if they belong to the same major group, i.e., have the same two-digit code, as described in the *Standard Industrial Classification Manual*, 1987 (SDAR 74:36:01:01).
- *Fuel-Burning Unit* - a furnace, boiler, apparatus, stack, or any of their components used in the process of burning fuel or other combustible material for the primary purposes of producing heat or power by indirect heat transfer (SDAR 74:36:01:01).
- *Fugitive Emissions* - those air pollutants which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening (SDAR 74:36:01:01).
- *Heat Input* - the aggregate heat content of all fuels whose products of combustion pass through a stack or stacks, using the heat input value of the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater (SDAR 74:36:01:01).
- *Incinerator* - a furnace used to burn solid waste to reduce the volume of the waste by removing its combustible material (SDAR 74:36:01:01).
- *Malfunction* - any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner, but not a failure caused entirely or in part by poor maintenance, careless operation, preventable equipment breakdown, or any other cause within the control of the owner or operator of the source (SDAR 74:36:01:01).
- *Minor Source* - a source whose potential emissions of a criteria pollutant are less than 100 tons a year and which does not meet the definition of a Part 70 source (SDAR 74:36:01:01) [Revised February 2000].
- *Municipal Solid Waste Landfill (MSWLF)* - the entire disposal facility in a contiguous geographical space where household waste, commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, or industrial solid waste is placed in or on land. Portions of the municipal solid waste landfill may be separated by access roads. A municipal solid waste landfill may be publicly or privately owned, a new landfill, an existing landfill, or a lateral expansion (SDAR 74:36:01:18) [Added April 1998].
- *New Source* - a source that has not been constructed and does not possess a permit or an approved state-issued variance (SDAR 74:36:01:01) [Revised March 2005].

- *Open Burning* - the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the ambient air without passage through a stack, duct, or chimney (SDAR 74:36:01:01).
- *Operating Permit* - a written authorization issued by the Board or the Secretary for the construction or operation of a source (SDAR 74:36:01:01).
- *Owner or Operator* - any person who owns, leases, operates, controls, or supervises a source (SDAR 74:36:01:01).
- *Part 70 Operating Permit* - any permit or group of permits covering a Part 70 source that is issued, renewed, amended, or revised (SDAR 74:36:01:01).
- *Part 70 Source* - any source subject to SDAR 74:36:05:03 (SDAR 74:36:01:01).
- *Particulate Matter* - a broad class of chemically and physically diverse substances that exist as discrete particles, liquid droplets, or solids over a wide range of sizes (SDAR 74:36:01:01) [Revised February 2000].
- *Permit Modification* - revision to a minor operating permit or Part 70 operating permit that meets the requirements of § 74:36:01:10 (SDAR 74:36:01:01) [Revised February 2000; Revised March 2005].
- *Permit Revision* - a permit modification, administrative permit amendment, or minor permit amendment (SDAR 74:36:01:01).
- *Person* - an individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision or state agency or any legal successor, representative, agent, or agency of the foregoing (SDAR 74:36:01:01).
- *PM₁₀* - particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by an applicable reference method (SDAR 74:36:01:01).
- *Salvage Operation* - an operation conducted in whole or in part for the reclaiming of product or material (SDAR 74:36:01:01).
- *Secretary* - the Secretary of the South Dakota Department of Environment and Natural Resources or an authorized representative (SDAR 74:36:01:01).
- *Shutdown* - the cessation of operation of any control equipment, process equipment, or process for any purposes (SDAR 74:36:01:01).
- *Smoke* - small gas-borne particles resulting from incomplete combustion, consisting predominantly, but not exclusively, of carbon, ash, and other combustible material, that form a visible plume in the air (SDAR 74:36:01:01).
- *Source* - a facility that emits or may emit any air pollutant regulated under the Clean Air Act (SDAR 74:36:01:01).
- *Startup* - the setting into operation of any control equipment, process equipment, or process for any purpose (SDAR 74:36:01:01).
- *Title IV* - Title IV of the Clean Air Act Amendments, acid deposition control (SDAR 74:36:01:01).
- *Title V* - Title V of the Clean Air Act Amendments, permits (SDAR 74:36:01:01).

- *Unit or Emission Unit* - any portable or stationary equipment or activity that emits or has the potential to emit a pollutant regulated under the Act (SDAR 74:36:01:01).
- *Variance* - a written authorization issued by the Board to operate a minor source in an attainment area that is not in compliance with certain portions of the Act (SDAR 74:36:01:01).
- *Volatile Organic Compounds (VOC)* - any compound of carbon which participates in atmospheric photochemical reactions, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate and excluding the following, which have been determined to have negligible photochemical reactivity: acetone; methane; ethane; methylene chloride (dichloromethane); 1,1,1-trichloroethane (methyl chloroform); 1,1,2-trichloro 1,2,2-trifluoroethane (CFC-113); trichlorofluoromethane (CFC-11); dichlorodifluoromethane (CFC-12); chlorodifluoromethane (HCFC-22); trifluoromethane (HFC-23) 1,2 dichloro 1,1,2,2-tetrafluoroethane (CFC-114); chloropentafluoroethane (CFC-115) 1,1,1-trifluoro 2,2 dichloroethane (HCFC-123); 1,1,1,2-tetrafluoroethane (HFC 134a); 1,1-dichloro 1-fluoroethane (HCFC-141b) 1-chloro 1,1-difluoroethane (HCFC-142b); 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124); pentafluoroethane (HFC-125); 1,1,2,2-tetrafluoroethane (HFC-134); 1,1,1-trifluoroethane (HFC-143a); 1,1-difluoroethane (HFC-152a); 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC-43-10mee); 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca); 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb); parachlorobenzotrifluoride (PCBTF); cyclic, branched, or linear completely methylated siloxanes; perchloroethylene (tetrachloroethylene); difluoromethane (HFC-32); ethylfluoride (HFC-161); 1,1,1,3,3,3-hexafluoropropane (HFC-236fa); 1,1,2,2,3-pentafluoropropane (HFC-245ca); 1,1,2,3,3-pentafluoropropane (HFC-245ea); 1,1,1,2,3-pentafluoropropane (HFC-245eb); 1,1,1,3,3-pentafluoropropane (HFC-245fa); 1,1,1,2,3,3-hexafluoropropane (HFC-236ea); 1,1,1,3,3-pentafluorobutane (HFC-365mfc); chlorofluoromethane (HCFC-31); 1-chloro-1-fluoroethane (HCFC-151a); 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a); 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane (C4F9OCH₃ or HFE-7100); 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF₃)₂CFCF₂OCH₃); 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (C4F9OC₂H₅ or HFE 7200); 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF₃)₂CFCF₂OCC₂H₅); methyl acetate; 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-C₃F₇OCH₃, HFE-7000); 3-ethoxy-1,1,1,2,3,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE-7500); 1,1,1,2,3,3,3-heptafluoropropane (HFC227ea); methyl formate (HCOOCH₃); and perfluorocarbon compounds which fall into these classes (SDAR 74:36:01:01) [Revised February 2007]:
 1. cyclic, branched, or linear completely fluorinated alkanes
 2. cyclic, branched, or linear completely fluorinated ethers with no unsaturations
 3. cyclic, branched, or linear completely fluorinated tertiary amines with no unsaturations; and
 4. sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

**AIR EMISSIONS MANAGEMENT
GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS**

REFER TO CHECKLIST ITEMS:

Missing Checklist Items	AE.2.1.SD.
State-Specific Requirements	
General	AE.5.1.SD.
Permits/ Notifications/ Exemptions	AE.6.1.SD. through AE.6.5.SD.
Emissions Limits	AE.9.1.SD. and AE.9.2.SD.
Fuel-Burning Equipment	AE.15.1.SD. and AE.15.2.SD.
Miscellaneous Incinerators	AE.25.1.SD.
Medical Waste Incinerators	
General	AE.30.1.SD. through AE.30.7.SD.
Monitoring	AE.32.1.SD. through AE.32.4.SD.
Reporting/Recordkeeping Requirements	AE.34.1.SD. through AE.34.4.SD.
Open Burning	AE.130.1.SD.
Other Emission/Sources	AE.155.1.SD. and AE.155.2.SD.

GUIDANCE FOR APPENDIX USERS

REFER TO APPENDIX NUMBERS: REFER TO APPENDIX TITLES:

1-1	Emission Limits for HMIWIs
1-2	Operating Parameters for HMIWIs To Be Monitored and Minimum Measurement and Recording Frequencies

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>AE.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>AE.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY: AIR EMISSIONS MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
STATE-SPECIFIC REQUIREMENTS AE.5. General AE.5.1.SD. Facilities operating minor sources must not circumvent emissions limitations (SDAR 74:36:04:01 and 74:36:04:31).	Verify that facilities operating minor sources do not utilize devices that conceal or dilute emissions of air pollutants that would otherwise violate South Dakota standards or the Federal Clean Air Act. Verify that minor sources do not emit pollutants into the ambient air from openings other than the stack, vent, or equivalent opening from which emissions were designed to be discharged.

COMPLIANCE CATEGORY: AIR EMISSIONS MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>STATE-SPECIFIC REQUIREMENTS</p> <p>AE.6 Permits/Notifications</p> <p>AE.6.1.SD. Minor sources must meet permit requirements permits (SDAR 74:36:04:01, 74:36:04:02, and 74:36:04:03, 74:36:04:03.01) [Revised February 2000; Revised February 2006].</p>	<p>(NOTE: The following sources or units are exempt from obtaining a minor air quality operating permit unless the source has requested federally enforceable permit conditions to avoid needing a Part 70 operating permit or a prevention of significant deterioration preconstruction permit:</p> <ul style="list-style-type: none"> - incinerators of less than 100 lb/h combined burning capacity which combust municipal or household waste - mobile internal combustion engines, including those in autos, trucks, tractors, airplanes, locomotives, and boats - laboratory equipment used exclusively for chemical or physical analysis - units fueled by natural gas used exclusively for space heating - units that have a heat input capability of not more than 3.5 MBtu/h - air conditioning or ventilating systems not designed to remove air pollutants from equipment - emergency electrical generator powered by petroleum products - any facility [see definition] with the potential to emit 25 tons or less per year of any pollutant (except lead) before the application of control equipment - units fueled by waste oil meeting state standards - other sources constructed for domestic purposes and not intended for use by an industry, manufacturer, or business - units that have the potential to emit 2 tpy or less of any criteria pollutant before the application of control equipment (the criteria pollutant emissions from the unit must be included in determining if the source is a minor source) <p>A source or unit that is exempt from permitting (except a source constructed for domestic purposes and not intended for use by an industry, manufacturer, or business) must still meet the visible emission restrictions.)</p> <p>Verify that minor sources are not constructed, installed, modified, or operated until the Board or the Secretary issues preconstruction or operating permits.</p> <p>Verify that emission control equipment is not installed, modified, or operated until the Board or the Secretary issues permits.</p> <p>Verify that the terms and conditions of permits have been met.</p> <p>(NOTE: Minor sources may request a variance from applicable emission standards. The variance will allow the minor source to operate in noncompliance with applicable emission standards. A minor source is eligible for a variance if it is located within an area that is in attainment for all regulated pollutants for which the source is requesting a variance. The minor source may not receive a variance if the source obtained a minor air quality operating permit by accepting federally enforceable permit conditions to prevent the source from needing a Part 70 air</p>

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
AE.6.2.SD. Minor sources that become Part 70 sources must meet permit requirements (SDAR 74:36:04:01 and 74:36:04:22).	quality operating permit.) Verify that, if minor sources become Part 70 sources because of a relaxation of Federal standards, minor sources meet Part 70 permit requirements.
AE.6.3.SD. Part 70 sources must meet Part 70 operating permit requirements (SDAR 74:36:05:02, 74:36:05:03, 74:36:05:04, and 74:36:05:04:01) [Revised February 2000; Revised February 2006].	(NOTE: The following sources are exempt from operating permit requirements: <ul style="list-style-type: none"> - all sources not included in the following list: <ul style="list-style-type: none"> - any major sources - any sources, including area sources, subject to standards set forth in 111 of the Clean Air Act - any sources, including area sources, subject to standards set forth in 112 of the Clean Air Act any affected sources subject to Title IV of the Clean Air Act - any sources in a source category designated by the Administrator of the USEPA according to Title V of the Clean Air Act - sources solely subject to 112(r) of the Clean Air Act - sources subject to 40 CFR 60, Subpart AAA, "Standards of Performance for New Residential Wood Heaters" - sources subject to 40 CFR 61.145, "Standard for Demolition and Renovation." Verify that the following sources are not constructed, installed, modified, revised, or operated until the Board or the Secretary has issued the preconstruction permit or Part 70 operating permits: <ul style="list-style-type: none"> - any major sources - any sources, including area sources, subject to standards set forth in 111 of the Clean Air Act - any sources, including area sources, subject to standards set forth in 112 of the Clean Air Act (except sources solely subject to the requirements of 112(r) of the Clean Air Act) - any affected sources subject to Title IV of the Clean Air Act - any sources in a source category designated by the Administrator of the USEPA according to Title V of the Clean Air Act. (05:03) Verify that the terms and conditions of permits have been met. (NOTE: The following emission units are considered insignificant activities and are exempt from inclusion in a Part 70 operating permit application: <ul style="list-style-type: none"> - one or more incinerators of less than 100 pounds per hour combined burning capacity that combust municipal or household waste - a mobile internal combustion engine, including engines in autos, trucks, tractors, airplanes, locomotives, and boats

COMPLIANCE CATEGORY: AIR EMISSIONS MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>AE.6.4.SD. Continuous Emission Monitoring Systems (CEMS) must meet reporting requirements (SDAR 74:36:13:01, 74:36:13:02, 74:36:13:03, 74:36:13:04) [Added February 2001; Revised March 2005].</p>	<ul style="list-style-type: none"> - laboratory equipment used exclusively for chemical or physical analysis - a device or apparatus that has a heat input capability of not more than 3,500,000 Btus per hour - an air conditioning or ventilating system not designed to remove air pollutants from equipment - routine housekeeping or plant upkeep activities such as painting buildings, retarring roofs, or paving parking lots - a unit that has the potential to emit two tons or less per year of any criteria pollutant before the application of control equipment (a unit may not be considered insignificant if a state or federal limit is applicable to the unit) - a unit that has the potential to emit two tons or less per year of any hazardous air pollutant (however, the hazardous air pollutant emissions from the unit must be included in determining if the source is a major or minor source; a unit can not be considered insignificant if a state or federal limit is applicable to the unit). <p>However, insignificant activities exempted because of size or production rate must be identified in the Part 70 operating permit application. An application may not omit information needed to determine the applicability of or to impose an applicable requirement.)</p> <p>(NOTE: The secretary may require major stationary air pollution sources to install, calibrate, operate, and maintain equipment approved by the department for the continuous monitoring and recording of emission data to determine compliance with a regulated air pollutant standard or where there is reason to believe there is a violation.)</p> <p>(NOTE: Minimum performance specifications for all continuous emission monitoring systems are those contained in 40 CFR. Part 60, Appendix B and 40 CFR 60.13 (July 2003).)</p> <p>Verify that owners or operators of those sources required to install continuous emission monitoring systems observe the reporting requirements contained in 40 C.F.R. § 60.7 (July 1, 2003).</p> <p>Verify that all records are made available to the Department on request.</p> <p>Verify that any emissions that exceed the standards listed in 40 C.F.R. Part 60 (July 1, 2003) or this article that are detected through continuous emission monitoring systems (CEMS) are reported to the department within the time constraints as determined by the secretary in the permit to operate.</p>
<p>AE.6.5.SD. New major stationary sources or major modification to existing major sources must obtain a preconstruction permit and a</p>	<p>Verify that new major stationary sources or major modifications to existing major sources obtain a preconstruction permit before beginning actual construction if they are located in the following areas:</p> <ul style="list-style-type: none"> - an attainment or unclassified area if the source would cause or contribute to

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>prevention of significant deterioration permit if they are located in specific areas (SDAR 74:36:10:03.01 and SDAR 74:36:09:01.01) [Added February 2004].</p>	<p>a violation of any national ambient air quality standard - an area designated nonattainment for any national ambient air quality standard if the source is major for the pollutant for which the area is designated nonattainment.</p> <p>Verify that new major stationary sources or major modifications to existing major sources that locate in an attainment or unclassified area obtain a prevention of significant deterioration permit prior to beginning actual construction.</p> <p>(NOTE: The procedural requirements for obtaining a preconstruction permit are similar to the procedural requirements for a Part 70 source, such as a timely and complete application, completeness review, statement of basis, public participation, and departmental recommendation.</p> <hr/>

COMPLIANCE CATEGORY: AIR EMISSIONS MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
STATE-SPECIFIC AE.9 Emissions Limits AE.9.1.SD. Facilities must not cause or contribute to violations of Federal ambient air quality standards (SDAR 74:36:02:02) [Revised February 2006].	<p>Verify that facilities do not cause or contribute to violations of Federal ambient air quality standards.</p> <p>(NOTE: The ambient air quality standards are listed in:</p> <ul style="list-style-type: none"> - 40 C.F.R. §§ 50.1 to 50.5, inclusive, (July 1, 2003) - 40 C.F.R. § 50.6 (July 1, 2003) - 40 C.F.R. § 50.7(a)(1), (b), and (c) (July 1, 2003) - 40 C.F.R. § 50.8 and 40 C.F.R. §§ 50.10 to 50.12, inclusive, (July 1, 2003). <p>The standards include normal background levels of air pollutants.)</p> <p>(NOTE: The requirements of this checklist item do not apply when one of the following criteria is met:</p> <ul style="list-style-type: none"> - if the presence of uncombined water is the only reason for failure to meet visible emissions standards - if smoke is emitted for the purpose of training or research and is approved by the Department - if equipment is shutdown for brief periods for soot-blowing, startup, shutdown, and malfunctions.) <p>Verify that sources do not discharge into the ambient air from a single unit of emissions an air pollutant with a density equal to or greater than 20 percent opacity, as established by the Environmental Protection Agency's Method 9 in 40 C.F.R. Part 60, Appendix A (July 1, 1999)</p>

COMPLIANCE CATEGORY: AIR EMISSIONS MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
AE.15. FUEL-BURNING EQUIPMENT <p>AE.15.1.SD. Fuel-burning units subject to permit requirements must not exceed emissions limitations for regulated air pollutants (SDAR 74:36:06:01, 74:36:06:02, and 74:36:06:05) [Revised February 2000].</p>	<p>(NOTE: The emissions limitations of this checklist item apply to units subject to permit requirements and combusting solid, gaseous, or liquid fuels.)</p> <p>Verify that fuel-burning units with heat input values less than 10 MBtu/h do not emit more than 0.6 lb/h of particulate matter per million British thermal units of heat input.</p> <p>Verify that fuel-burning units with heat input values equal to or greater than 10 MBtu/h do not emit particulate matter in excess of the rates determined by the following equation:</p> $- E=0.811H-0.131$ <ul style="list-style-type: none"> - when E equals the particulate emissions rate in pounds per hour per MBtu of heat input and H equals the heat input in million British thermal units per hour. <p>Verify that fuel-burning units do not emit SO₂ emissions in excess of 3 lb/MBtu, based on a 3-h rolling average (i.e., the arithmetic average of three contiguous 1-h periods).</p> <p>(NOTE: If the nature of any unit or the design of any equipment allows for more than one interpretation of the emissions limitations, the interpretation resulting in the most stringent value for allowable emissions applies.)</p>
AE.15.2.SD. Waste wood burners must not exceed visible emissions limitations (SDAR 74:36:06:01, 74:36:06:04, and 74:36:06:05).	<p>(NOTE: The emissions limitations of this checklist item apply to waste wood burners subject to permit requirements.)</p> <p>Verify that waste wood burners do not discharge regulated air pollutants of a density greater than 20 percent opacity.</p> <p>(NOTE: Except for New Source Performance Standards (i.e., SDAR 74:36:07), no other emissions limitations apply to waste wood burners.)</p> <p>(NOTE: If the nature of any unit or the design of any equipment allows for more than one interpretation of the emissions limitations, the interpretation resulting in the most stringent value for allowable emissions applies.)</p>

COMPLIANCE CATEGORY: AIR EMISSIONS MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>AE.25.</p> <p>MISCELLANEOUS INCINERATORS</p> <p>AE.25.1.SD. Incinerators must not exceed visible emissions limitations (SDAR 74:36:06:01, 74:36:06:04, and 74:36:06:05).</p>	<p>(NOTE: The emissions limitations of this checklist item apply to incinerators subject to permit requirements.)</p> <p>Verify that waste incinerators do not discharge regulated air pollutants of a density greater than 20 percent opacity.</p> <p>(NOTE: Except for New Source Performance Standards (i.e., SDAR 74:36:07), no other emissions limitations apply to incinerators.)</p> <p>(NOTE: If the nature of any unit or the design of any equipment allows for more than one interpretation of the emissions limitations, the interpretation resulting in the most stringent value for allowable emissions applies.)</p>

COMPLIANCE CATEGORY: AIR EMISSIONS MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>MEDICAL WASTE INCINERATORS</p> <p>AE.30. General</p> <p>AE.30.1.SD. Hospital/medical/infectious waste incinerators (HMIWIs) that started construction on or before 20 June 1996 must meet specific emissions limitations (SDAR 74:36:07:06.01, 40 CFR 60.32e, and 40 CFR 60.33e) [Added March 2005; Revised February 2006; Citation Revised February 2008].</p>	<p>(NOTE: South Dakota has adopted the Federal requirements for Existing HMIWIs in Subpart Ce of 40 CFR 60.)</p> <p>Verify that, on or after the date on which the initial performance test is completed or is required to be completed, whichever date comes first, no owner or operator of an HMIWI discharges into the atmosphere:</p> <ul style="list-style-type: none"> - from that HMIWI, any gases that contain stack emissions in excess of the limits presented in Appendix 1-1, Table 1, or Table 2 for small HMIWIs - from the stack of that HMIWI, any gases that exhibit greater than 10 percent opacity (6-min block average). <p>(NOTE: The emission limits apply at all times except during periods of startup, shutdown, or malfunction, provided that no hospital waste or medical/infectious waste is charged to the HMIWI during startup, shutdown, or malfunction.)</p> <p>(NOTE: “Small HMIWIs” include any small HMIWIs located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area (SMSA) and which burns less than 2000 lb/week of hospital waste and medical/infectious waste. (The 2000 lb/week quantity limit does not apply during performance tests.))</p> <p>(NOTE: The requirements of this subsection apply to each individual hospital/medical/infectious waste incinerator (HMIWI) for which construction was commenced on or before 20 June 1996. These requirements do not apply to the following (SDAR 74:36:07:06.01 and 40 CFR 60.32e):</p> <ul style="list-style-type: none"> - a combustor during periods when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned, provided the owner or operator of the combustor: <ul style="list-style-type: none"> - notifies the Administrator of an exemption claim - keeps records on a calendar quarter basis of the periods of time when only pathological waste, low-level radioactive waste and/or chemotherapeutic waste is burned - any co-fired combustor if the owner or operator: <ul style="list-style-type: none"> - notifies the Administrator of an exemption claim - provides an estimate of the relative amounts of hospital waste, medical/infectious waste, and other fuels and wastes to be combusted - keeps records on a calendar quarter basis of the weight of hospital waste and medical/infectious waste combusted, and the weight of all other fuels and wastes combusted at the co-fired combustor - any combustor required to have a permit under section 3005 of the <i>Solid Waste Disposal Act</i> (SWDA)

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>AE.30.2.SD. HMIWIs constructed on or before June 20, 1996 equipped with a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber must comply with specific operating parameters (SDAR 74:36:07:06.01, 40 CFR 60.37e, and 40 CFR 60.56(d)) [Added March 2005; Citation Revised February 2008].</p>	<ul style="list-style-type: none"> - any combustor which meets the applicability requirements under (subparts Cb, Ea, or Eb of 40 CFR 60) (standards or guidelines for certain municipal waste combustors) - any pyrolysis unit (defined in 60.51.c) - cement kilns firing hospital waste and/or medical/infectious waste - physical or operational changes made to an existing HMIWI solely for the purpose of complying with emission guidelines of this subsection are not considered a modification and do not result in an existing HMIWI becoming subject new source performance standards under and 40 CFR 60, Subpart Ec.) <p>(NOTE: See AE.30.1.SD. for exemptions.)</p> <p>Verify that facilities equipped with the following control systems establish and operate within the parameters in Appendix 1-2:</p> <ul style="list-style-type: none"> - a dry scrubber followed by a fabric filter - a wet scrubber - a dry scrubber followed by a fabric filter and a wet scrubber. <p>(NOTE: Operating parameter limits do not apply during performance tests.)</p> <p>(NOTE: A facility may conduct a repeat performance test within 30 days of violation of applicable operating parameters to demonstrate that the facility is not in violation of the applicable emission limit.)</p> <p>Verify that, if the facility is using an air pollution control device other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber, the facility petitions the Administrator for additional site-specific operating parameters to be established during the initial performance test and continuously monitored thereafter.</p> <p>(NOTE: The initial performance test cannot be conducted until after the petition has been approved by the Administrator.)</p> <p>(NOTE: A facility may conduct a repeat performance test at any time to establish new values for the operating parameters. The Department may request a repeat performance test at any time as well.)</p>
<p>AE.30.3.SD. HMIWIs constructed on or before June 20, 1996 equipped with a dry scrubber followed by a fabric filter are required to meet additional operating parameters (SDAR 74:36:07:06.01, 40 CFR</p>	<p>(NOTE: See AE.30.1.SD. for exemptions.)</p> <p>Verify that the HMIWI is not operated above the maximum charge rate and below the minimum secondary chamber temperature simultaneously.</p> <p>(NOTE: See Appendix 1-2 for operating parameters.)</p> <p>Verify that the HMIWI is not operated above the maximum fabric filter inlet</p>

COMPLIANCE CATEGORY: AIR EMISSIONS MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
60.37e)) [Added March 2005; Citation Revised February 2008].	<p>temperature and below the minimum dioxin/furan sorbent flow rate simultaneously.</p> <p>Verify that the HMIWI is not operated above the maximum charge rate and below the minimum HCl sorbent flow rate simultaneously.</p> <p>Verify that the facility does not use the bypass stack except during startup, shutdown, or malfunction.</p> <p>(NOTE: A HMIWI may conduct a repeat performance test within 30 days of violation of applicable operating parameters to demonstrate that the facility is not in violation of the applicable emission limit.)</p>
AE.30.4.SD. HMIWIs constructed on or before June 20, 1996 equipped with a wet scrubber are required to meet additional operating parameters (SDAR 74:36:07:06.01, 40 CFR 60.37e and 40 CFR 60.56c (f) [Added March 2005; Citation Revised February 2008].	<p>(NOTE: See AE.30.1.SD. for exemptions.)</p> <p>Verify that the HMIWI is not operated above the maximum charge rate and below the minimum pressure drop across the wet scrubber or below the minimum horsepower or amperage to the system simultaneously.</p> <p>(NOTE: See Appendix 1-2 for operating parameters.)</p> <p>Verify that the HMIWI is not operated above the maximum charge rate and below the minimum secondary chamber temperature simultaneously.</p> <p>Verify that the HMIWI is not operated above the maximum fabric filter inlet temperature, below the minimum secondary chamber temperature, and below the minimum scrubber liquor flow rate simultaneously.</p> <p>Verify that the HMIWI is not operated above the maximum charge rate and below the minimum scrubber liquor pH simultaneously.</p> <p>Verify that the HMIWI is not operated above the maximum flue gas temperature and above the maximum charge rate simultaneously.</p> <p>Verify that the facility does not use the bypass stack except during startup, shutdown, or malfunction.</p> <p>(NOTE: A facility may conduct a repeat performance test within 30 days of violation of applicable operating parameters to demonstrate that the facility is not in violation of the applicable emission limit.)</p>
AE.30.5.SD. HMIWIs constructed on or before June 20, 1996 equipped with a dry scrubber followed by a fabric filter and a wet scrubber are	<p>(NOTE: See AE.30.1.SD. for exemptions.)</p> <p>Verify that the HMIWI does not operate above the maximum charge rate and below the minimum secondary chamber temperature simultaneously.</p>

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>required to meet additional operating parameters (SDAR 74:36:07:06.01, 40 CFR 60.37e, and 40 CFR 60.56c(e)) [Added March 2005; Citation Revised February 2008].</p> <p>AE.30.6.SD. Operators of HMIWI constructed on or before June 20, 1996 are required to be trained, qualified, and available (SDAR 74:36:07:06.01, 40 CFR 60.34e, and 40 CFR 60.53c(a) through (g)) [Added March 2005; Citation Revised February 2008].</p>	<p>(NOTE: See Appendix 1-2 for operating parameters.)</p> <p>Verify that the HMIWI does not operate above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate simultaneously.</p> <p>Verify that the HMIWI does not operate above the maximum charge rate and below the maximum scrubber liquor pH simultaneously.</p> <p>Verify that the HMIWI does not operate above the maximum charge rate and below the minimum Hg sorbent flow rate simultaneously.</p> <p>Verify that the facility does not use the bypass stack except during startup, shutdown, or malfunction.</p> <p>(NOTE: A facility may conduct a repeat performance test within 30 days of violation of applicable operating parameters to demonstrate that the facility is not in violation of the applicable emission limit.)</p> <p>(NOTE: See AE.30.1.SD. for exemptions.)</p> <p>Verify that a trained and qualified HMIWI operator is accessible, either at the facility or available within 1 h, at all times that the HMIWI is being operated.</p> <p>(NOTE: The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one or more HMIWI operators.)</p> <p>Verify that HMIWI operators were trained at a state-approved program or by completing the following requirements:</p> <ul style="list-style-type: none"> - 24 h of training on the following subjects: <ul style="list-style-type: none"> - environmental concerns, including pathogen destruction and types of emissions - basic combustion principles, including products of combustion - operation of the type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures - combustion controls and monitoring - operation of air pollution control equipment and factors affecting performance (if applicable) - methods to monitor pollutants (continuous emission monitoring systems and monitoring of HMIWI and air pollution control device operating parameters) and equipment calibration procedures (where applicable) - inspection and maintenance of the HMIWI, air pollution control devices, and continuous emission monitoring systems - actions to correct malfunctions or conditions that may lead to malfunction - bottom and fly ash characteristics and handling procedures - applicable Federal, state, and local regulations

COMPLIANCE CATEGORY: AIR EMISSIONS MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>AE.30.7.SD. HMIWIs constructed on or before June 20, 1996 must prepare a waste management plan (SDAR 74:36:07:06.01, 40 CFR 60.35e, and 40 CFR 60.55c) [Added March 2005; Revised February 2008].</p>	<p>- work safety procedures - pre-startup inspections - recordkeeping requirements - an examination designed and administered by the instructor - reference material distributed to the attendees covering the course topics.</p> <p>Verify that HMIWI operators have obtained qualification by:</p> <ul style="list-style-type: none"> - completion of a training course described above, and - either 6-mo experience as an HMIWI operator, 6-mo experience as a direct supervisor of an HMIWI operator, or completion of at least two burn cycles under the observation of two qualified HMIWI operators. <p>(NOTE: Qualification is valid from the date on which the examination is passed or the completion of the required experience, whichever is later.)</p> <p>Verify that HMIWI operators have maintained qualification by completing and passing an annual review or refresher course of at least 4 h covering, at a minimum, the following:</p> <ul style="list-style-type: none"> - update of regulations - incinerator operation, including startup and shutdown procedures - inspection and maintenance - responses to malfunctions or conditions that may lead to malfunction - discussion of operating problems encountered by attendees. <p>(NOTE: A lapsed qualification shall be renewed by one of the following methods:</p> <ul style="list-style-type: none"> - for a lapse of less than 3 yr, the HMIWI operator shall complete and pass a standard annual refresher course as described above - for a lapse of 3 yr or more, the HMIWI operator shall complete and pass a training course as described above.) <p>(NOTE: See AE.30.1.SD. for exemptions.)</p> <p>Verify that the HMIWI has prepared a waste management plan.</p> <p>Verify that the waste management plan identifies both the feasibility and the approach to separate certain components of solid waste from the health care waste stream in order to reduce the amount of toxic emissions from incinerated waste.</p> <p>(NOTE: A waste management plan may include, but is not limited to:</p> <ul style="list-style-type: none"> - elements such as: <ul style="list-style-type: none"> - paper - cardboard - plastics - glass - battery

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<ul style="list-style-type: none"> - metal recycling - purchasing recycled or recyclable products.) <p>(NOTE: A waste management plan may include different goals or approaches for different areas or departments of the facility and need not include new waste management goals for every waste stream.)</p> <p>(NOTE: A waste management plan should identify, where possible, reasonably available additional waste management measures, taking into account the effectiveness of waste management measures already in place, the costs of additional measures, the emission reductions expected to be achieved, and any other environmental or energy impacts they might have.)</p> <p>Verify that the American Hospital Association's publication entitled "An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities" was considered in the development of the waste management plan.</p>

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>MEDICAL WASTE INCINERATORS</p> <p>AE.32. Monitoring</p> <p>AE.32.1.SD. HMIWIs constructed on or before June 20, 1996 must conduct performance testing in accordance with specific provisions to determine compliance with emission limits (SDAR 74:36:07:06.01, 60 CFR 60.32e, and 40 CFR 60.37e) [Added March 2005; Citation Revised February 2008].</p>	<p>Verify that an initial performance test was conducted using approved testing methodology.</p> <p>(NOTE: The use of the bypass stack during any performance test shall invalidate that performance test.)</p> <p>Verify that, following the date on which the initial performance test was completed or was required to be completed, whichever date comes first, the facility determines compliance with:</p> <ul style="list-style-type: none"> - the opacity limit by conducting an annual performance test (no more than 12 mo following the previous performance test) using appropriate procedures and test methods - the PM, CO, and HCl emission limits by conducting an annual performance test (no more than 12 mo following the previous performance test) using appropriate procedures and test methods. <p>(NOTE: If all three performance tests over a 3-yr period indicate compliance with the emission limit for a pollutant (PM, CO, or HCl), the facility may forego a performance test for that pollutant for the subsequent 2 yr.)</p> <p>(NOTE: At a minimum, a performance test for PM, CO, and HCl shall be conducted every third year (no more than 36 mo following the previous performance test.) If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, or HCl), the facility may forego a performance test for that pollutant for an additional 2 yr.)</p> <p>(NOTE: If any performance test indicates noncompliance with the respective emission limit, a performance test for that pollutant shall be conducted annually until all annual performance tests over a 3-yr period indicate compliance with the emission limit.)</p> <p>Verify that facilities using a CEMS to demonstrate compliance with any of the emission limits:</p> <ul style="list-style-type: none"> - determine compliance with the appropriate emission limit(s) using a 12-h rolling average, calculated each hour as the average of the previous 12 operating hours (not including startup, shutdown, or malfunction) - operate all CEMS in accordance with the applicable procedures under appendices B and F of 40 CFR Part 60.

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>(NOTE: South Dakota has adopted the Federal requirements for Existing HMIWIs in Subpart Ce of 40 CFR 60.)</p> <p>(NOTE: The requirements of this subsection apply to each individual hospital/medical/infectious waste incinerator (HMIWI) for which construction was commenced on or before 20 June 1996. These requirements do not apply to the following (SDAR 74:36:07:06.01 and 40 CFR 60.32e):</p> <ul style="list-style-type: none"> - a combustor during periods when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned, provided the owner or operator of the combustor: <ul style="list-style-type: none"> - notifies the Administrator of an exemption claim; and - keeps records on a calendar quarter basis of the periods of time when only pathological waste, low-level radioactive waste and/or chemotherapeutic waste is burned - any co-fired combustor if the owner or operator: <ul style="list-style-type: none"> - notifies the Administrator of an exemption claim - provides an estimate of the relative amounts of hospital waste, medical/infectious waste, and other fuels and wastes to be combusted; and - keeps records on a calendar quarter basis of the weight of hospital waste and medical/infectious waste combusted, and the weight of all other fuels and wastes combusted at the co-fired combustor - any combustor required to have a permit under section 3005 of the <i>Solid Waste Disposal Act</i> (SWDA) - any combustor which meets the applicability requirements under (subparts Cb, Ea, or Eb of 40 CFR 60) (standards or guidelines for certain municipal waste combustors) - any pyrolysis unit (defined in 60.51.c) - cement kilns firing hospital waste and/or medical/infectious waste - physical or operational changes made to an existing HMIWI solely for the purpose of complying with emission guidelines of this subsection are not considered a modification and do not result in an existing HMIWI becoming subject new source performance standards under and 40 CFR 60, Subpart Ec.)
AE.32.2.SD. HMIWIs constructed on or before June 20, 1996 must install, calibrate, maintain, and operate monitoring devices or establish methods to monitor operating parameters at applicable frequencies at all times except during periods of startup and shutdown (SDAR 74:36:07:06.01. 40 CFR 60.37e, and 40 CFR 60.57c)	<p>(NOTE: See AE.32.1.SD. for exemptions.)</p> <p>Verify that calibration of the monitoring devices is completed to manufacturer's specifications.</p> <p>Verify that, where a device is not installed, calibrated, maintained, and operated, a method has been established for monitoring the applicable operating parameters.</p> <p>Verify that the monitoring devices or methods used measure and record values for all operating parameters listed in Appendix 1-2 at the frequencies indicated at all times except during startup and shutdown.</p>

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>[Added March 2005; Citation Revised February 2008].</p> <p>AE.32.3.SD. Small HMIWIs constructed on or before June 20, 1996 must install, calibrate, maintain, and operate monitoring devices to monitor operating parameters at applicable frequencies (SDAR 74:36:07:06.01 and 40 CFR 60.37e(d)) [Added March 2005; Citation Revised February 2008].</p>	<p>Verify that the facility is using (and appropriately calibrating, maintaining, and operating) a monitoring device or method to measure the use of the bypass stack including:</p> <ul style="list-style-type: none"> - date - time - duration. <p>Verify that a facility using something other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber to comply with emission limits, installs, calibrates, maintains, and operates equipment necessary to monitor the site-specific operating parameters.</p> <p>Verify that the facility is obtaining monitoring data at all times during HMIWI operation, except during periods of:</p> <ul style="list-style-type: none"> - monitoring equipment malfunction - calibration - repair. <p>(NOTE: At a minimum, valid monitoring data must be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the HMIWI is combusting hospital waste and/or medical/infectious waste.)</p> <p>(NOTE: See AE.32.1.SD. for exemptions.)</p> <p>(NOTE: These requirements apply to any small HMIWI subject to the emission limits in Table 2 of Appendix 1-1.)</p> <p>Verify that small HMIWIs install, calibrate (to manufacturers' specifications), maintain, and operate a device for measuring and recording the temperature of the secondary chamber on a continuous basis, the output of which is recorded, at a minimum, once every minute throughout operation.</p> <p>Verify that small HMIWIs install, calibrate (to manufacturers' specifications), maintain, and operate a device that automatically measures and records the date, time, and weight of each charge fed into the HMIWI.</p> <p>Verify that small HMIWIs obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair.</p> <p>(NOTE: At a minimum, valid monitoring data will be obtained for 75 percent of the operating hour per day and for 90 percent of the operating hour per calendar quarter that the designated facility is combusting hospital waste and/or medical/infectious waste.)</p>

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>AE.32.4.SD. Small HMIWIs constructed on or before June 20, 1996 must comply with specific inspection guidelines (SDAR 74:36:07:06.01 and 40 CFR 60.36e) [Added March 2005].</p>	<p>(NOTE: See AE.32.1.SD. for exemptions.)</p> <p>Verify that, no later than 20 December 2001 and annually thereafter (no more than 12 mo following the previous annual equipment inspection) an equipment inspection is performed where the small HMIWI:</p> <ul style="list-style-type: none"> - inspects all burners, pilot assemblies, and pilot sensing devices for proper operation, and cleans pilot flame sensor, as necessary - ensures proper adjustment of primary and secondary chamber combustion air, and adjust as necessary - inspects hinges and door latches, and lubricates as necessary - inspects dampers, fans, and blowers for proper operation - inspects HMIWI door and door gaskets for proper sealing - inspects motors for proper operation - inspects primary chamber refractory lining, and cleans and repairs/replaces lining as necessary - inspects incinerator shell for corrosion and/or hot spots - inspects secondary/tertiary chamber and stack, cleans as necessary - inspects mechanical loader, including limit switches, for proper operation, if applicable - visually inspects waste bed (grates), and repairs/seals, as appropriate - for the burn cycle that follows the inspection, documents that the incinerator is operating properly and makes any necessary adjustments - inspects air pollution control devices(s) for proper operation, if applicable - inspects waste heat boiler systems to ensure proper operation, if applicable - inspects bypass stack components - ensures proper calibration of thermocouples, sorbent feed systems, and any other monitoring equipment - generally observes that the equipment is maintained in good operating condition. <p>Verify that, within 10 operating days following an equipment inspection, all necessary repairs are completed (unless the owner or operator obtains written approval from the Department establishing a date whereby all necessary repairs of the designated facility will be completed).</p>

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>MEDICAL WASTE INCINERATORS</p> <p>AE.34. Reporting/ Recordkeeping Requirements</p> <p>AE.34.1.SD. Hospital/ medical/infectious waste incinerators (HMIWIs) that commenced construction on or before June 20, 1996 must submit specified information to the appropriate authorities (SDAR 74:36:07:06.01, 40 CFR 40.32e, 40 CFR 60.38e and 40 CFR 60.58c(d) through (f)) [Added February 2001; Revised March 2005; Citation Revised February 2008].</p>	<p>(NOTE: South Dakota has adopted the Federal requirements for Existing HMIWIs in Subpart Ce of 40 CFR 60.)</p> <p>Verify that the facility submitted the following information no later than 60 days following the initial performance test with all reports signed by the facilities manager:</p> <ul style="list-style-type: none"> - the initial performance test data as recorded - the values for the site-specific operating parameters - the waste management plan. <p>Verify that the facility submitted an annual report 1 yr following the above submission and that subsequent reports are submitted no more than 12 mo following the previous report (under a Title V operating permit, these submissions are semi-annual).</p> <p>Verify that the annual report is signed by the facilities manager and includes:</p> <ul style="list-style-type: none"> - the values for the site-specific operating parameters - the highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported - the highest maximum operating parameter and the lowest minimum operating parameter, as applicable for each site-specific operating parameter for the calendar year preceding the year being reported, in order to provide the EPA Administrator with a summary of the performance of the HMIWI over a 2-yr period - any information, recorded for the calendar year being reported, related to: <ul style="list-style-type: none"> - identification of calendar days for which data on emission rates or operating parameters as described above have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken - identification of calendar days, times, and durations of malfunctions with description of the malfunction and the corrective action taken - identification of calendar days for which data on emission rates or operating parameters as described above exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<ul style="list-style-type: none"> - any information, recorded for the calendar year preceding the year being reported, in order to provide the EPA Administrator with a summary of the performance of the HMIWI over a 2-yr period, related to: <ul style="list-style-type: none"> - identification of calendar days for which data on emission rates or operating parameters as described above have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken - identification of calendar days, times, and durations of malfunctions with a description of the malfunction and the corrective action taken - identification of calendar days for which data on emission rates or operating parameters as described above exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken - if a performance test was conducted during the reporting period, the results of that test - if no exceedances or malfunctions were reported for the calendar year being reported, a statement that no exceedances occurred during the reporting period - any use of the bypass stack, the duration, reason for malfunction, and corrective action taken. <p>Verify that the facility submits semiannual reports no later than 60 days following the reporting period containing any recorded information regarding:</p> <ul style="list-style-type: none"> - identification of calendar days for which data on emission rates or operating parameters as described above have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken - identification of calendar days, times and durations of malfunctions, a description of the malfunction, and the corrective action taken - identification of calendar days for which data on emission rates or operating parameters as described above exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken. <p>(NOTE: The first semiannual reporting period ends 6 mo following the submission of information as required above. Subsequent reports must be submitted no later than 6 calendar months following the previous report. All reports will be signed by the facilities manager.)</p> <p>Verify that all records specified above are maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator.</p> <p>(NOTE: The requirements of this subsection apply to each individual hospital/medical/infectious waste incinerator (HMIWI) for which construction was commenced on or before 20 June 1996. These requirements do not apply to</p>

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>AE.34.2.SD. HMIWIs that commenced construction on or before June 20, 1996 must maintain specific documentation at the facility (SDAR 74:36:07:06.01, 40 CFR 60.34e, and 40 CFR 60.53c h through (j)) [Added March 2005; Citation Revised February 2008].</p>	<p>the following:</p> <ul style="list-style-type: none"> - a combustor during periods when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned, provided the owner or operator of the combustor: <ul style="list-style-type: none"> - notifies the Administrator of an exemption claim; and - keeps records on a calendar quarter basis of the periods of time when only pathological waste, low-level radioactive waste and/or chemotherapeutic waste is burned - any co-fired combustor if the owner or operator: <ul style="list-style-type: none"> - notifies the Administrator of an exemption claim - provides an estimate of the relative amounts of hospital waste, medical/infectious waste, and other fuels and wastes to be combusted; and - keeps records on a calendar quarter basis of the weight of hospital waste and medical/infectious waste combusted, and the weight of all other fuels and wastes combusted at the co-fired combustor - any combustor required to have a permit under section 3005 of the <i>Solid Waste Disposal Act</i> (SWDA) - any combustor which meets the applicability requirements under (subparts Cb, Ea, or Eb of 40 CFR 60) (standards or guidelines for certain municipal waste combustors) - any pyrolysis unit (defined in 60.51.c) - cement kilns firing hospital waste and/or medical/infectious waste - physical or operational changes made to an existing HMIWI solely for the purpose of complying with emission guidelines of this subsection are not considered a modification and do not result in an existing HMIWI becoming subject new source performance standards under and 40 CFR 60, Subpart Ec.) <p>(NOTE: See AE.34.1.SD. for exemptions.)</p> <p>Verify that the following documentation is maintained at the HMIWI:</p> <ul style="list-style-type: none"> - summary of the applicable standards - description of basic combustion theory applicable to an HMIWI - procedures for receiving, handling, and charging waste - HMIWI startup, shutdown, and malfunction procedures - procedures for maintaining proper combustion air supply levels - procedures for operating the HMIWI and associated air pollution control systems within the standards established under this subpart - procedures for responding to periodic malfunction or conditions that may lead to malfunction - procedures for monitoring HMIWI emissions - reporting and recordkeeping procedures - procedures for handling ash. <p>Verify that a program has been established that requires all HMIWI operators to</p>

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>AE.34.3.SD. HMIWIs that commenced construction on or before June 20, 1996 must maintain specified information for a period of at least 5 yr (SDAR 74:36:07:06.01, 40 CFR 60.38e, and 40 CFR 60.58c(b)) [Added March 2005; Citation Revised February 2008].</p>	<p>review annually the information in all required documentation.</p> <p>(NOTE: The initial review of the information in all required documentation shall be conducted by 16 September 1998 or prior to assumption of responsibilities affecting HMIWI operation, whichever date is later.)</p> <p>Verify that subsequent reviews of the information in all required documentation are conducted annually.</p> <p>Verify that all required documentation is kept in a readily accessible location for all HMIWI operators.</p> <p>(NOTE: All required documentation, as well as all training records, shall be available for inspection by the EPA or its delegated enforcement agent upon request.)</p> <p>(NOTE: See AE.34.1.SD. for exemptions.)</p> <p>(NOTE: Required records should be maintained onsite in either a paper copy or a computer-readable format.)</p> <p>Verify that the facility maintains the following information (as applicable) for a period of at least 5 yr:</p> <ul style="list-style-type: none"> - calendar date of each record - records of the following data: <ul style="list-style-type: none"> - concentrations of any pollutant listed in Appendix 1-1 or measurements of opacity as determined by the CEMS - results of fugitive emissions tests - HMIWI charge dates, times, and weights and hourly charge rates - fabric filter inlet temperatures during each minute of operation - amount and type of dioxin/furan sorbent used during each hour of operation - amount and type of Hg sorbent used during each hour of operation - amount and type of HCl sorbent used during each hour of operation - secondary chamber temperatures recorded during each minute of operation - liquor flow rate to the wet scrubber inlet during each minute of operation - horsepower or amperage to the wet scrubber during each minute of operation - pressure drop across the wet scrubber system during each minute of operation - temperature at the outlet from the wet scrubber during each minute of operation - pH at the inlet to the wet scrubber during each minute of operation - records indicating use of the bypass stack, including dates, times, and

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>AE.34.4.SD. Small HMIWIs that commenced construction on or before June 20, 1996 must meet specific recordkeeping requirements (SDAR 74:36:07:06.01 and 40 CFR 60.38e (b)) [Added March 2005; Citation Revised February 2008].</p>	<p>durations</p> <ul style="list-style-type: none"> - for site-specific operating parameters, all operating parameter data collected - identification of calendar days for which data on emission rates or operating parameters have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken - identification of calendar days, times, and durations of malfunctions with a description of the malfunction and the corrective action taken - identification of calendar days for which data on emission rates or operating parameters exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken. - the results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters - all documentation produced as a result of the siting requirements - records showing the names of HMIWI operators who completed the review of information (see checklist item AE.34.1.SD.), including the date of the initial review and all subsequent annual reviews - records showing the names of HMIWI operators who have completed training, including documentation of training and dates of training - records showing the names of the HMIWI operators who have met the criteria for qualification and the dates of their qualification - records of calibration of any monitoring devices. <p>(NOTE: See AE.34.1.SD. for exemptions.)</p> <p>(NOTE: These requirements apply to any small HMIWI subject to the emission limits in Table 2 of Appendix 1-1.)</p> <p>Verify that small HMIWIs maintain records of the annual equipment inspections, any required maintenance, and any repairs not completed within 10 days of an inspection or the timeframe established by the Department.</p> <p>Verify that small HMIWIs submit an annual report containing the information listed in the previous paragraph no later than 60 days following the year in which data were collected.</p> <p>Verify that subsequent reports are sent no later than 12 calendar months following the previous report (once the unit is subject to permitting requirements in Air Emissions Operating Permit Regulations for the Purposes of Title V of the Federal Clean Air Act, the owner or operator must submit these reports semiannually).</p> <p>Verify that the report is signed by the facility manager.</p>

**COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement**

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010

COMPLIANCE CATEGORY:
AIR EMISSIONS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>AE.130.</p> <p>OPEN BURNING</p> <p>AE.130.1.SD. Persons must not engage in specific open burning practices (SDAR 74:36:06:07) [Revised April 1998; Revised February 2000].</p>	<p>Verify that persons do not engage in any of the following open burning practices:</p> <ul style="list-style-type: none"> - burning waste oils, rubber, waste tires, tar paper, or asphalt shingles (for the purposes of this checklist item, waste oils refer to any oil that has been refined from crude oil, used, and contaminated by physical or chemical impurities) - municipalities or county governmental agencies burning municipal solid waste (unless exempted by the small town exemption) - open burning in salvage operations (except as allowed in the South Dakota solid waste regulations) - burning railroad ties or wood treated with inorganic arsenicals, pentachlorophenol, or creosols. <p>(NOTE: An exception for crude oil is allowed as a remediation alternative for soils contaminated with crude oil if the Secretary approves the alternative remediation process.)</p>

COMPLIANCE CATEGORY: AIR EMISSIONS MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
AE.155. OTHER EMISSIONS/ SOURCES AE.155.1.SD. Process industry units subject to permit requirements must not exceed emissions limitations for regulated substances (SDAR 74:36:06:01, 74:36:06:03, and 74:36:06:05) [Revised February 2000].	<p>(NOTE: The requirements of this checklist item apply to process industry units subject to permit requirements.)</p> <p>Verify that process industry units do not emit particulate matter in excess of the rates determined by the following equations:</p> <ul style="list-style-type: none"> - for units with process weight rates up to 60,000 lb/h: $E=4.10 \times P[0.67]$ - for units with process weight rates greater than 60,000 lb/h: $E=[55.0 \times P0.11]40$ when E equals the rate of emission in pounds per hour and P equals the weight rate in tons per hour. <p>Verify that process industry units using combustible fuel do not emit SO₂ in excess of 3 lb/MBtu, based on a 3-h rolling average (i.e., the arithmetic average of three contiguous 1-h periods).</p> <p>(NOTE: If the nature of any unit or the design of any equipment allows for more than one interpretation of the emissions limitations, the interpretation resulting in the most stringent value for allowable emissions applies.)</p> <p>(NOTE: Moved to SO.67.1.SD.; February 2000.)</p>
AE.155.2.SD. [Deleted February 2000].	

Appendix 1-1

Emission Limits for HMIWI

(Source: SDAR 74:36:07:06 and 40 CFR 60.33e Tables 1 and 2) [Added March 2005]

Table 2, below, applies to small HMIWIs: Small HMIWIs located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area (SMSA) and which burns less than 2000 lb/week of hospital waste and medical/infectious waste. (The quantity limit does not apply during performance tests.) Table 1 applies to all others.

Table 1:Emission Limits for Small, Medium, and Large HMIWIs

Pollutant	Units (7 percent oxygen, dry basis)	Emission Limits		
		Small	HMIWI size Medium	Large
Particulate matter	Milligrams per dry standard cubic meter (grains per dry standard cubic foot)	115 (0.05)	69 (0.03)	34 (0.015)
Carbon monoxide	Parts per million by volume	40	40	40
Dioxins/furans	Nanograms per dry standard cubic meter total dioxins/furans (grains per billion dry standard cubic feet) or nanograms per dry standard cubic meter total dioxins/furans TEQ (grains per billion dry standard cubic feet).	125 (55) or 2.3 (1.0)	125 (55) or 2.3 (1.0)	125 (55) or 2.3 (1.0)
Hydrogen chloride	Parts per million or percent reduction	100 or 93%	100 or 93%	100 or 93%
Sulfur dioxide	Parts per million by volume	55	55	55
Nitrogen oxides	Parts per million by volume	250	250	250
Lead	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet) or percent reduction	1.2 (0.52) or 70%	1.2 (0.52) or 70%	1.2 (0.52) or 70%
Cadmium	Milligrams per dry standard cubic meter (grains per thousand per dry standard cubic feet) or percent reduction	0.16 (0.07) or 65%	0.16 (0.07) or 65%	0.16 (0.07) or 65%
Mercury	Milligrams per dry standard cubic meter	0.55 (0.24)	0.55 (0.24)	0.55 (0.24)

Table 2. Emission Limits for Small HMIWI

Pollutant	Units (7 percent oxygen, dry basis)	HMIWI Emission Limits
Particulate matter	Milligrams per dry standard cubic meter (grains per dry standard cubic foot)	197 (0.086)
Carbon monoxide	Parts per million by volume	40
Dioxins/furans	Nanograms per dry standard cubic total dioxins/furans (grains per billion dry standard cubic feet) or nanograms per dry standard cubic meter TEQ (grains per billion dry standard cubic feet)	800 (350) or 15 (6.6)
Hydrogen chloride	Parts per million by volume	3100
Sulfur dioxide	Parts per million by volume	55
Nitrogen oxides	Parts per million by volume	250
Lead	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet)	10 (4.4)
Cadmium	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet)	4 (1.7)
Mercury	Milligrams per dry standard cubic meter	7.5 (3.3)

Appendix 1-2

Operating Parameters for HMIWIs To Be Monitored and Minimum Measurement and Recording Frequencies

(Source: SDAR 74:36:07:06 and 40 CFR 60, Table 3 to Subpart Ec)
 [Added March 2005]

Operating parameters to be monitored	Minimum Frequency		Control System		
	Data measurement	Data recording	Dry scrubber followed by fabric filter	Wet scrubber	Dry scrubber followed by fabric filter and wet scrubber
Maximum operating parameters:					
Maximum charge rate	Continuous	1 x hour	x	x	x
Maximum fabric filter inlet temperature	Continuous	1 x minute	x		x
Maximum flue gas temperature	Continuous	1 x minute	x	x	
Minimum operating parameter:					
Minimum secondary chamber temp.	Continuous	1 x minute	x	x	x
Minimum dioxin/furan sorbent flow rate	Hourly	1 x hour	x		x
Minimum HCl sorbent flow rate	Hourly	1 x hour	x		x
Minimum mercury (Hg) sorbent flow rate	Hourly	1 x hour	x		x
Minimum pressure drop across the wet scrubber or minimum horsepower or amperage to wet scrubber	Continuous	1 x minute		x	x
Minimum scrubber liquor flow rate	Continuous	1 x minute		x	x
Minimum scrubber liquor pH	Continuous	1 x minute		x	x

SECTION 2
CULTURAL RESOURCES MANAGEMENT
South Dakota Supplement, February 2010

This section covers the state requirements for Cultural Resources Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Definitions

- *Exterior Features* - the architectural style, general design and general arrangement of the exterior of a building or other structure, including the color, the kind and texture of the building material and the type and style of all windows, doors, light fixtures, signs, other appurtenant fixtures and natural features such as trees and shrubbery. In the case of outdoor advertising signs, an exterior feature is the style, material, size and location of all such signs. (South Dakota Codified Laws (SDCL) 1-19B-43) [Citation February 2007].
- *Historic Property* - any building, structure, object, district, area or site that is significant in the history, architecture, archaeology, paleontology or culture of the state, its communities or the nation (SDCL 1-19A-2) [Citation Revised February 2007].

**CULTURAL RESOURCES MANAGEMENT
GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS**

REFER TO CHECKLIST ITEMS:

Missing Checklist Items	CR.2.1.SD.
Historic Properties	CR.5.1.SD.

COMPLIANCE CATEGORY:
CULTURAL RESOURCES MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>CR.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>CR.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY:
CULTURAL RESOURCES MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>CR.5.</p> <p>HISTORIC PROPERTIES</p> <p>CR.5.1.SD. A certificate of appropriateness must be granted before construction on the exterior of a structure in an historic district (SDCL 1-19B-42) [Citation Revised February 2007].</p>	<p>Verify that, after the designation of an historic district, no exterior portion of any building or structure is erected, altered, restored, moved or demolished until after an application for a certificate of appropriateness as to exterior features has been submitted to and approved by the historic district commission.</p>

SECTION 3
HAZARDOUS MATERIALS MANAGEMENT
South Dakota Supplement, February 2010

This section covers the South Dakota state requirements for Hazardous Materials Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Definitions

- *CERCLA* - the Comprehensive Emergency Response, Compensation and Liability Act of 1980 (South Dakota Administrative Rules, Title 74, Article 34, Chapter 1, Section 1 (SDAR 74:34:01:01)).
- *Department* - the Department of Environment and Natural Resources (SDAR 74:34:01:01).
- *Hazardous Chemical* - any chemical which is a physical or health hazard, but not the following substances:
 1. any food, food additive, color additive, drug, or cosmetic regulated by the U.S. Food and Drug Administration
 2. any substance present as a solid in any manufactured item if exposure to the substance does not occur under normal conditions of use (SDAR 74:34:01:01).
- *Hazardous Waste* - as defined in 40 CFR 261.3 (July 1, 1988) (SDAR 74:34:01:01).
- *Mixture* - a heterogeneous association of substances in which the various individual substances retain their identities and can usually be separated by mechanical means (SDAR 74:34:01:01).
- *Reportable Quantity* - a discharge of a regulated substance to the environment in sufficient quantity to harm or threaten to harm the public health, safety, welfare, property, or natural resources of the state, or a regulated substance discharged in a quantity reportable according to the provisions of SARA, Title III, Section 304 (1986) (SDAR 74:34:01:01).
- *Responsible Person* - as defined in SDCL 34A-12-1 (SDAR 74:34:01:01).
- *SARA* - the Superfund Amendments and Reauthorization Act of 1986 (SDAR 74:34:01:01).

**HAZARDOUS MATERIALS MANAGEMENT
GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS**

REFER TO CHECKLIST ITEMS:

Missing Checklist Items
Releases of Hazardous Materials

HM.2.1.SD.
HM.20.1.SD. through HM.20.3.SD.

COMPLIANCE CATEGORY:
HAZARDOUS MATERIALS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>HM.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>HM.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY:
HAZARDOUS MATERIALS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>HM.20.</p> <p>RELEASES OF HAZARDOUS MATERIALS</p> <p>HM.20.1.SD. Unpermitted discharges of regulated substances to the environment are prohibited (SDAR 74:34:01 and 74:34:01:03).</p>	<p>Verify that no one discharges a regulated substance (see below) to the environment except pursuant to and in compliance with the conditions of a Federal or state permit or by activities allowed by Federal or state law or rule.</p> <p>(NOTE: The mixture of a listed regulated substance with an unregulated substance subjects the mixture to full regulation under this chapter.)</p> <p>(NOTE: The following lists constitute regulated substances under South Dakota Codified Law (SDCL) chapter 34A-12:</p> <ul style="list-style-type: none"> - substances listed in the "Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act," USEPA (January 1990) - fertilizers as defined in SDCL 38-19-1(1), (2), (3),(12), (13), and (14), including fertilizer derivatives - pesticides as defined in SDCL 38-20A-1(1), (3), (4),(5), and (6), SDCL 38-20A-10; and those substances defined in SDCL 38-21-14(4), (5), (18), (19), (21), and (29), including metabolites and all active and inert ingredients of these substances - petroleum and petroleum substances, including oil, gasoline, kerosene, fuel oil, oil sludge, oil refuse, oil mixed with other wastes, refined or blended crude petroleum stock, and any other oil or petroleum substance - radiological, chemical, or biological warfare agents or radiological waste - hazardous wastes as described in 40 CFR Part 261, Subparts C and D (July 1, 1988).)
<p>HM.20.2.SD. Unpermitted discharges of regulated substances to the environment must be reported to the Department (SDAR 74:34:01:04 and 74:34:01:05).</p>	<p>Verify that a known discharge of a regulated substance to the environment is reported to the Department immediately if one of the following conditions exists:</p> <ul style="list-style-type: none"> - the discharge threatens or is in a position to threaten the waters of the state - the discharge causes an immediate danger to human health or safety - the discharge exceeds 25 gal or causes a sheen on surface water or it exceeds any groundwater quality standards or surface water quality standards - the discharge harms or threatens to harm wildlife or aquatic life - the discharge is required to be reported according to SARA, Title III, Section 304 (1986). <p>Verify that the immediate report is telephoned to the Department as soon as the responsible person becomes aware of the discharge.</p> <p>Verify that, subsequent to the initial report, the responsible person immediately</p>

COMPLIANCE CATEGORY:
HAZARDOUS MATERIALS MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>HM.20.3.SD. Unpermitted discharges of regulated substances reports must include specific information (SDAR 74:34:01:06) [Revised February 2005].</p>	<p>notifies the Department of information that changes the accuracy of the initial report.</p> <p>Verify that the facility reports a suspected discharge to the Department within 24 h after the discharge is suspected.</p> <p>(NOTE: A discharge is suspected when one of the following occurs:</p> <ul style="list-style-type: none"> - testing, sampling, or monitoring results from discharge detection devices indicate that a discharge has occurred - impacts are discovered in the surrounding area, such as evidence of a regulated substance discharge in soils, basements, sewer and utility lines, groundwater, or nearby surface water - unusual operating conditions exist, such as the erratic behavior of regulated substance dispensing equipment, the sudden loss of a regulated substance from tanks, an unexplained escape of vaporized regulated substance, or the physical presence of a regulated substance of unknown origin at a regulated substance facility.) <p>Verify that the discharge report provides the following information:</p> <ul style="list-style-type: none"> - the specific location of the discharge - the type and amount of regulated substance discharged - the responsible person's name, address, and telephone number - an explanation of any response action that was taken - the list of agencies notified - the suspected cause of the discharge - the date and time of the discharge to the extent known - the immediate known impacts of the discharge - the information that is required to be reported according to SARA, Title III, Section 304(a) and (b) (1986).

SECTION 4

HAZARDOUS WASTE MANAGEMENT

South Dakota Supplement, February 2010

This section covers the South Dakota requirements for Hazardous Waste Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

South Dakota has adopted the Federal regulations on hazardous waste (July 1, 2008) with minor changes.

Definitions

South Dakota has repealed its own hazardous waste regulations and adopted the Federal. A remaining difference is that certain terms that are used in the Federal regulations have different meanings. The state-specific meanings for these terms are listed below:

- *Administrator* - the Secretary of the Department of Environment and Natural Resources or a designee, except at (South Dakota Administrative Rules, Title 74, Article 28, Chapter 21:01 (SDAR 74:28:21:01) [Revised April 1998]:
 1. 40 CFR 260.10, the definitions of “administrator,” “regional administrator,” and “hazardous waste constituent”;
 2. 40 CFR Part 261, Appendix IX;
 3. 40 CFR 262.55; 262.56(a); 262.56(b); and Part 262, Appendix;
 4. 40 CFR 264.12(a) and 265.12(a);
 5. 40 CFR 268.40(b);
 6. 40 CFR 270.2, the definitions of “administrator,” “director,” “major facility,” “regional administrator,” and “state/EPA agreement”;
 7. 40 CFR 270.3; 270.5; 270.10(e)(2), and (4); 270.10(f) and (g); 270.11(a)(3); 270.14(b)(20); 270.32(b)(2); and 270.51.
- *Director* - the secretary of the Department of Environment and Natural Resources or a designee (SDAR 74:28:21:01).
- *EPA* - the state Department of Environment and Natural Resources, except for (SDAR 74:28:21:01) [revised April 1998]:
 1. Any references to “EPA identification numbers,” “EPA forms,” “EPA hazardous waste numbers,” “EPA test methods,” “EPA publications,” “EPA manuals,” “EPA guidance,” or “EPA Acknowledgment of Consent”;
 2. Any reference to EPA in the following regulations:
 - a. 40 CFR 260.10, the definitions of “administrator,” “EPA region,” “federal agency,” “person,” and “regional administrator”;
 - b. 40 CFR Part 261, Appendix IX;
 - c. 40 CFR 262.32(b); 262.51; 262.53(a); 262.53(c) to 262.53(f), inclusive; 262.54(g)(1); and Part 262, Appendix;
 - d. 40 CFR 264.11 and 265.11;
 - e. 40 CFR 268.1(e)(3);
 - f. 40 CFR 270.1(a)(1); 270.1(b); 270.3; 270.5; 270.10(e)(2); 270.11(a)(3); 270.32(a) and (c); 270.51; 270.72(a)(5); and 270.72(b)(5);
 - g. 40 CFR 270.2, the definitions of “administrator,” “approved program or approved state,” “director,” “Environmental Protection Agency,” “EPA,” “final authorization,” “permit,” “person,” “regional administrator,” and “state/EPA agreement”.

- *EPA Hazardous Waste Number* - the number assigned by the Secretary to each hazardous waste (SDAR 74:28:21:01).
- *EPA Identification Number* - the number assigned by the Secretary to each generator, transporter, and treatment, storage, or disposal facility (SDAR 74:28:21:01).
- *Federal Register* - a newspaper of general circulation in the state of South Dakota except at (SDAR 74:28:21:01) [Revised April 1998]:
 1. 40 CFR 260.11(b)
 2. 40 CFR 270.6(b)
 3. 40 CFR 270.10(e)(2)
 4. 40 CFR Part 261, Appendix X
 5. 40 CFR Part 266, Appendices IX and X.
- *Resource Conservation and Recovery Act or RCRA* - SDCL chapter 34A-11, the South Dakota Hazardous Waste Management Act, except at (SDAR 74:28:21:01):
 1. 40 CFR 260.10, the definition of “Act” or “RCRA”
 2. 40 CFR Part 261, Appendix IX
 3. 40 CFR Part 262, Appendix
 4. 40 CFR 270.1(a)(2) and 270.51
 5. 40 CFR 270.2, the definition of “RCRA.”
- *Regional Administrator* - the Secretary of the Department of Environment and Natural Resources or a designee, except at (SDAR 74:28:21:01) [Revised April 1998]:
 1. 40 CFR 260.10, the definitions of “administrator,” “regional administrator,” and “hazardous waste constituent”;
 2. 40 CFR Part 261, Appendix IX
 3. 40 CFR 262.12 and Part 262, Appendix
 4. 40 CFR 263.11
 5. 40 CFR 264.12(a) and 265.12(a)
 6. 40 CFR 270.2, the definitions of “administrator,” “director,” “major facility,” “regional administrator,” and “state/EPA agreement”
 7. CFR 270.3; 270.5; 270.10(e)(2), and (4); 270.10(f) and (g); 270.11(a)(3); 270.14(b)(20); 270.32(b)(2); and 270.51.
- *Secretary* - the Secretary of the Department of Environment and Natural Resources or a designee (SDAR 74:28:21:01).
- *State* - the state of South Dakota, except at (SDAR 74:28:21:01):
 1. 40 CFR 260.10, the definitions of “person,” “state,” and “United States”;
 2. 40 CFR 264.143(e)(1); 265.143(d)(1); 264.145(e)(1); 265.145(d)(1); 264.147(a)(1)(ii), (b)(1)(ii), (g)(2), and (i)(4); and 265.147(g)(2) and (i)(4); and
 3. 40 CFR 270.2, the definitions of “approved program or approved State,” “director,” “final authorization,” “person,” and “state.”

**HAZARDOUS WASTE MANAGEMENT
GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS**

REFER TO CHECKLIST ITEMS:

Missing Checklist Items	HW.2.1.SD
State-Specific Hazardous Waste Requirements	HW.5.1.SD.
All Sizes Of Generators	HW.10.1.SD.

COMPLIANCE CATEGORY:
HAZARDOUS WASTE MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>HW.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>HW.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations</p>

COMPLIANCE CATEGORY:
HAZARDOUS WASTE MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>HW.5.</p> <p>STATE-SPECIFIC HAZARDOUS WASTE REQUIREMENTS</p> <p>HW.5.1.SD. The placement of bulk or noncontainerized hazardous waste underground is prohibited (SDAR 74:28:25:02) [Revised February 2009].</p>	<p>Verify that the facility does not allow the placement of any bulk or noncontainerized liquid hazardous waste in any salt dome formation, salt bed formation, underground mine, or cave.</p>

**COMPLIANCE CATEGORY:
HAZARDOUS WASTE MANAGEMENT
South Dakota Supplement**

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
HW.10. ALL SIZES OF GENERATORS HW.10.1.SD. [Deleted February 2010].	(NOTE: See Toxic Substances Management in the TEAM Guide and South Dakota Supplement for PCB requirements.)

SECTION 5
NATURAL RESOURCES MANAGEMENT
South Dakota Supplement, February 2010

This section covers the state requirements for Natural Resources Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

NATURAL RESOURCES MANAGEMENT GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS	
REFER TO CHECKLIST ITEMS:	
Missing Checklist Items Wildlife	NR.2.1.SD. NR.20.1.SD. and NR.20.2.SD.

GUIDANCE FOR APPENDIX USERS	
REFER TO APPENDIX NUMBERS:	REFER TO APPENDIX TITLES:
5-1	Threatened, Endangered, and Candidate Species of South Dakota

COMPLIANCE CATEGORY:
NATURAL RESOURCES MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>NR.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>NR.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY:
NATURAL RESOURCES MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>NR.20.</p> <p>WILDLIFE</p> <p>NR.20.1.SD. Wildlife must be treated according to its status as threatened or endangered (SDCL 34A-8-9, SDAR 41:09:06:22 and SDAR 41:10:02:18) [Revised February 2007].</p>	<p>Verify that no person takes, possesses, transports, imports, exports, processes, sells, or offers for sale, buys or offers to buy, any species of wildlife or plants listed in Appendix 5-1.</p> <p>Verify that no threatened or endangered raptor is captured or possessed without a special permit issued by the department secretary.</p> <p>Harassment of the nesting and rearing sites of the least tern, an endangered species, and the piping plover, a threatened species, is prohibited.</p>
<p>NR.20.2.SD. [Deleted February 2005].</p>	(NOTE: SDCL 41-8-2.1 repealed.)

Appendix 5-1

Threatened, Endangered, and Candidate Species of South Dakota

(<http://www.sdgfp.info/Wildlife/Diversity/TES.htm>)

[Revised February 2000; Revised March 2003; Revised February 2006;
Revised February 2007; Revised February 2009]

NAME	SCIENTIFIC NAME	FEDERAL STATUS	STATE STATUS
Invertebrates:			
American burying beetle	<i>Nicrophorus americanus</i>	LE	
Scaleshell	<i>Leptodea leptodon</i>	LE	
Higgins Eye	<i>Lampsilis higginsii</i>	LE	
Dakota skipper	<i>Hesperia dacotae</i>	C	
Fishes:			
Banded killifish	<i>Fundulus diaphanus</i>		SE
Blacknose shiner	<i>Notropis heterolepis</i>		SE
Finescale dace	<i>Phoxinus neogaeus</i>		SE
Longnose sucker	<i>Catostomus catostomus</i>		ST
Northern redbelly dace	<i>Phoxinus eos</i>		ST
Pallid sturgeon	<i>Scaphirhynchus albus</i>	LE	SE
Pearl dace	<i>Margariscus margarita</i>		ST
Sicklefin chub	<i>Macrhybopsis meeki</i>		SE
Sturgeon chub	<i>Macrhybopsis gelida</i>		ST
Topeka shiner	<i>Notropis topeka</i>	LE	
Reptiles and amphibians:			
Eastern hognose snake	<i>Heterodon platirhinos</i>		ST
False map turtle	<i>Graptemys pseudogeographica</i>		ST
Lined snake	<i>Tropidoclonion lineatum</i>		SE
Birds:			
American dipper	<i>Cinclus mexicanus</i>		ST
Bald eagle	<i>Haliaeetus leucocephalus</i>		ST
Eskimo curlew	<i>Numenius borealis</i>	LE	SE
Interior least tern	<i>Sterna antillarum athalassos</i>	LE	SE
Osprey	<i>Pandion haliaetus</i>		ST
Peregrine falcon	<i>Falco peregrinus</i>		SE
Piping plover	<i>Charadrius melanotos</i>	LT	ST
Whooping crane	<i>Grus americana</i>	LE	SE
Mammals:			
Black-footed ferret	<i>Mustela nigripes</i>	LE	SE
Gray wolf	<i>Canis lupus</i>	LE	
River otter	<i>Lontra canadensis</i>		ST
Swift fox	<i>Vulpes velox</i>		ST

Plants:			
Western prairie fringed orchid	<i>Platanthera praecox</i>	LT	
KEY TO CODES:			
LE = Federal Endangered	SE = State Endangered		
LT = Federal Threatened	ST = State Threatened		
C = Federal Candidate			
PE = Proposed Endangered			
PT= Proposed Threatened			

SECTION 6

OTHER ENVIRONMENTAL ISSUES

South Dakota Supplement, February 2010

This section covers the state requirements for Other Environmental Issues and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

**OTHER ENVIRONMENTAL ISSUES
GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS**

REFER TO CHECKLIST ITEMS:

The NEPA Process

Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Missing Checklist Items O1.2.1.SD.

Environmental Noise

Missing Checklist Items O2.2.1.SD.

State-Specific Requirements O2.5.1.SD.

CERCLA Cleanup Sites

Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Missing Checklist Items O3.2.1.SD.

Pollution Prevention

Refer to the U.S. TEAM Guide and the DOD Component Supplements for DOD and service-specific requirements.

Missing Checklist Items O4.2.1.SD.

Program Management

Refer to the U.S. TEAM Guide and the DOD Component Supplements for DOD and service-specific requirements.

COMPLIANCE CATEGORY:
OTHER ENVIRONMENTAL ISSUES
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>THE NEPA PROCESS</p> <p>O1.2. Missing Checklist Items</p> <p>O1.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY:
OTHER ENVIRONMENTAL ISSUES
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ENVIRONMENTAL NOISE</p> <p>O2.2. Missing Checklist Items</p> <p>O2.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY:
OTHER ENVIRONMENTAL ISSUES
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
ENVIRONMENTAL NOISE <p>O2.5. State-Specific Requirements</p> <p>O2.5.1.SD. Motor vehicles must utilize exhaust systems and mufflers (SDCL 32-15-17).</p>	Verify that motor vehicles are not operated unless they are utilizing exhaust systems and mufflers in good working order.

COMPLIANCE CATEGORY:
OTHER ENVIRONMENTAL ISSUES
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>CERCLA CLEANUP SITES</p> <p>O3.2 Missing Checklist Items</p> <p>O3.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY:
OTHER ENVIRONMENTAL ISSUES
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>POLLUTION PREVENTION</p> <p>O4.2. Missing Checklist Items</p> <p>O4.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

SECTION 7

PESTICIDE MANAGEMENT

South Dakota Supplement, February 2010

This section covers the state requirements for Pesticide Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Definitions

- *Accident* - an undesirable unexpected event caused by the use of a pesticide that adversely affects man or the environment (SDAR 12:56:01:01).
- *Act* - the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. 135 et seq., as amended by the Federal Environmental Pesticide Control Act of 1972, 86 Stat. 973 (SDAR 12:56:01:01).
- *Agency* - the U. S. environmental protection agency (SDAR 12:56:01:01).
- *Air Gap Separation* - physical separation between the free flowing discharge end of a water pipeline and an open or nonpressurized receiving vessel. To have an acceptable air gap, the end of the discharge pipe must be located a distance of at least twice the diameter of the pipe above the topmost rim of the receiving vessel (SDAR 12:56:17:10(2)) [Citation Revised February 2007].
- *Appurtenances* - valves, pumps, fittings, pipes, hoses, and metering devices that are used for transferring pesticides or otherwise used in conducting operational area activities pertaining to pesticides (SDAR 12:56:01:01(4)).
- *Bulk Pesticide* - any volume of a pesticide which is transported or held in an immediate reusable container in undivided quantities greater than 100 lb net dry weight or 55 U.S. gallons liquid measure. The term does not include pesticides which are in the custody of the ultimate user and are fully prepared for use by the user (SDAR 12:56:01:01(5)).
- *Bulk Pesticide Storage Facility* - an area, location, tract of land, building, structure, or premises constructed in accordance with rules promulgated by the secretary for the storage of bulk pesticides (SDAR 12:56:01:01).
- *Bulk Repackaging* - the transfer of bulk pesticide from one container to another in an unaltered state in preparation for sale (SDAR 12:56:01:01).
- *Carrier* - a person engaged in the transporting of passengers or goods for hire (SDAR 12:56:01:01).
- *Certification* - the process by which the South Dakota department of agriculture determines whether or not a person is a competent pesticide applicator (SDAR 12:56:01:01).
- *Check Valve* - a device that provides a positive (absolute) closure which prohibits the flow of material or liquid in the opposite direction of that desired when operation of the irrigation system pumping plant or chemical injection unit fails or is shut down (SDAR 74:02:09:01).
- *Clay Soil* - any substance consisting of a mixture of the following components in the stated percentages of total soil weight: clay particles of the size of .02 mm or less (40 percent minimum); silt particles of the size of .05

mm to .002 mm (40 percent maximum); fine sand particles of the size of .25 mm to .05 mm (45 percent maximum) (SDAR 12:56:01:01).

- *Compatibility* - a property of a pesticide which permits its use with other chemicals without undesirable results being caused by the combination (SDAR 12:56:01:01).
- *Competent* - qualified in the performance of functions associated with pesticide application, the degree of proficiency required being directly related to the nature of the activity and the associated responsibility (SDAR 12:56:01:01).
- *Complete Destruction* - alteration of pesticides by physical or chemical processes to inorganic forms, incapable of altering the environment (SDAR 12:56:01:01).
- *Container* - a package, can, bottle, bag, barrel, drum, tank, or other containing device used to enclose a pesticide or pesticide related wastes but not spray applicator tanks and nurse tanks which contain pesticides which are fully prepared for use (SDAR 12:44:05:01).
- *Cross-linked Polyolefin* - crosslinkable high density polyethylene, type 3, Class B, Category 5 resin with minimum 0.5 percent carbon black as defined in American Society for Testing and Materials (ASTM) standard D 1248-84, constructed with a minimum thickness of 3/8 in., ultraviolet stabilized for outdoor use, and with a low temperature impact strength of a minimum of 90 ft lb of impact at -40x5 according to the Association of Rotational Molders (ARM) impact test (SDAR 12:56:13:03(1)(d)).
- *Department* - the department of agriculture (SDAR 12:56:01:01).
- *Diluent* - material added to a pesticide or a pesticide-related waste by the user or manufacturer to reduce the concentration of active ingredient (SDAR 12:56:01:01).
- *Discharge* - any spill, leak, deposit, dumping, or emptying, either accidental or otherwise, that results in a release of a pesticide into an uncontained portion of an operational area, but not lawful transfer, mixing, loading, unloading, repackaging, or refilling of a pesticide carried out over operational area containment and not lawful distribution, use, disposal, or application of a pesticide (SDAR 12:56:01:01).
- *Distribute* -to import, consign, sell, offer for sale, solicit orders for sale, or otherwise supply pesticide for sale or use in this state (SDAR 12:56:01:01).
- *Drift* - movement of a pesticide during or after application or use through air to a site other than the intended site of application or use; (SDAR 12:56:01:01).
- *Encapsulate* - to seal a pesticide, and its container if appropriate, in an impervious container made of plastic, glass, or other material which will not be chemically degraded by the contents and then seal the container within a durable container made from steel, plastic, concrete, or other suitable material of sufficient thickness and strength to resist physical damage during and subsequent to burial (SDAR 12:56:01:01).
- *Excess Pesticides* - pesticides which may not be legally sold pursuant to the Act or which are to be discarded (SDAR 12:44:05:01).
- *Hazard* - probability that a given pesticide will have an unreasonable adverse effect on man or the environment in a given situation (SDAR 12:56:01:01).
- *Heavy Metals* - metallic elements of higher atomic weights, including arsenic, beryllium, cadmium, copper, lead, mercury, manganese, zinc, chromium, tin, thallium, and selenium (SDAR 12:56:01:01).
- *Inorganic Arsenicals* - any compound containing arsenic in which the arsenic is not bonded to the carbon atom (SDAR 12:56:01:01).

- *Inorganic Pesticides* - substances containing noncarbon hydrogen which are used as pesticides (SDAR 12:56:01:01).
- *Interlock* - the arrangement or interconnection of the irrigation pump, chemical injection units, and other pumps or supply tanks so that total shutdown of the system will occur if any component malfunctions or fails (SDAR 74:02:09:01).
- *Lake* - a pond or reservoir created by either natural or artificial means, but not ponds and appurtenances used for the treatment and disposal of wastes and permitted for such uses by the state (SDAR 12:56:01:01).
- *Leachate* - the end product of percolating a liquid through solid waste so that dissolved or suspended materials are extracted from it (SDAR 12:56:01:01).
- *Low Pressure Drain* - a self-activating device to drain that portion of an irrigation pipeline or conduit whose contents could potentially enter the water supply when operation of the irrigation system pumping plant fails or is shut down (SDAR 74:02:09:01).
- *Metallo-organic Pesticide* - a class of carbon hydrogen pesticides containing one or more metal or metalloid atoms in the structure (SDAR 12:56:01:01).
- *Nonpermanent Bulk Pesticide Storage Containers* - mobile containers positioned on or part of movable equipment, such as trucks, trailers, and tank cars (SDAR 12:56:01:01).
- *Open burning* - combustion of a pesticide or container in any fashion other than incineration in a pesticide incinerator (SDAR 12:56:01:01).
- *Open Discharge System* - an irrigation pump discharge with an air gap (SDAR 74:02:09:04) [Citation Revised February 2007].
- *Open Dumping* - the placing of pesticides or pesticide containers in a land site in a manner other than prescribed by the South Dakota department of environment and natural resources in chapter 74:27:03, and which does not prevent adverse effects on the environment, and which exposes pesticides and pesticide containers to the elements, vectors, and scavengers (SDAR 12:56:01:01).
- *Operational Area* - an area where the contents of pesticide containers are transferred between containers, including transfer to application equipment; where pesticides are loaded, unloaded, mixed, repackaged, or refilled; or where pesticides are cleaned, washed, or rinsed from containers or from application, handling, storage, or transportation equipment; but not a facility or location that receives or distributes pesticides in the manufacturer's original unbroken containers which remain sealed and are otherwise unopened (SDAR 12:56:01:01).
- *Operational Area Containment* - any structure or system constructed in accordance with chapter 12:56:17, either stationary or portable, which is effectively designed and constructed to intercept and contain pesticide discharges, including container or equipment wash water and rinsates, and to prevent escape, runoff, and leaching from an operational area (SDAR 12:56:01:01).
- *Organic Pesticides* - substances containing carbon hydrogen which are used as pesticides, excluding metallo-organic compounds (SDAR 12:56:01:01).
- *Permanent Bulk Pesticide Storage Containers* - containers which are not positioned on or a part of movable equipment, such as trucks, trailers, and tank cars (SDAR 12:56:01:01).

- *Pesticide Incinerator* - any installation capable of the controlled combustion of pesticides at a temperature of 1000 degrees centigrade for two seconds dwell time that will assure complete conversion of the specific pesticide to inorganic gases and solid ash residues (SDAR 12:56:01:01).
- *Principal Operational Area* - the operational area where a pesticide applicator conducts the majority of the activities listed under operational area (SDAR 12:56:01:01).
- *Residential Premises* - a structure that is used wholly or in part as a human residence, including all lawns, grounds, facilities, and furnishings pertaining to that structure; a residential structure occupied on a rental basis; and a mobile home used as a residence and the site on which it is located (SDAR 12:56:01:01).
- *Runoff* - the portion of precipitation that drains from an area as surface flow (SDAR 12:56:01:01).
- *Sanitary Landfill* - a disposal facility approved or permitted by the state under chapter 74:27:04, employing an engineered method of disposing of solid wastes on land in a manner which minimizes environmental hazards by spreading the solid wastes in thin layers, compacting the solid wastes to the smallest practical volume, and applying cover material at the end of each working day (SDAR 12:56:01:01).
- *Scrubbing* - washing of impurities from any process gas stream (SDAR 12:56:01:01).
- *Soil Injection* - the placement of pesticides by ordinary tillage practices within the plow layer of a soil (SDAR 12:56:01:01).
- *Specially Designated Landfill* - a landfill designated by the South Dakota department of environment and natural resources where pesticide-related waste, pesticides, and pesticide containers can be disposed of legally and where such dumping does not expose the public, the environment, or surface and subsurface waters to any contamination (SDAR 12:56:01:01).
- *Statute* - SDCL 38-21-14 to 38-21-55, inclusive (SDAR 12:56:01:01).
- *Stream* - a river, creek, or tributary (SDAR 12:56:01:01).
- *Transitory* - a mobile nonpermanent outlet such as a truck (SDAR 12:56:01:01).
- *Triple Rinse* - flushing of containers three times, each time using a volume of the normal diluent equal to approximately 20 percent of the containers' capacity, and adding the rinse liquid to the spray mixture or disposing of it by a method prescribed for the pesticide in chapter 12:56:02 (SDAR 12:56:01:01).
- *Under the Direct Supervision of* - application of a pesticide by a competent person acting under the instruction and control of a licensed applicator or a licensed operator, even though the licensed applicator or licensed operator is not physically present at the time and place the pesticide is applied (SDAR 12:56:01:01).
- *Unreclaimable Residues* - residual materials of little or no value remaining after incineration (SDAR 12:56:01:01).
- *Vacuum Relief Valve* - a device that automatically relieves or breaks vacuum in an irrigation pipeline or conduit due to system failure or shutdown (SDAR 74:02:09:01).
- *Water Dumping* - disposal of pesticides into or on lakes, ponds, rivers, sewers, and other water systems (SDAR 12:56:01:01).
- *Well* - an artificial excavation or opening in the ground that is deeper than its largest surface dimension, that is made by digging, boring, drilling, jetting, or other artificial method for the purpose of obtaining groundwater, and that is currently used or usable or has been abandoned (SDAR 12:56:01:01).

- *Well Injection* - disposal of excess pesticides and rinse liquids through a hole or shaft to a subsurface stratum (SDAR 12:56:01:01).
- *Wetlands* - those areas that are inundated or saturated by surface or groundwater and on which a prevalence of vegetation typically adapted for life in saturated soil conditions has been established (SDAR 12:56:01:01).

**PESTICIDE MANAGEMENT
GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS**

REFER TO CHECKLIST ITEMS:

Missing Checklist Items	PM.2.1.SD.
Pesticide Applicators	PM.5.1.SD. through PM.5.3.SD.
Pesticide Application	
Agriculture	PM.20.1.SD. through PM.20.11.SD.
Documentation	PM.40.1.SD. through PM.40.4.SD.
Storage/Mixing/Handling	PM.45.1.SD. through PM.45.9.SD.
Disposal	PM.55.1.SD. through PM.55.9.SD.
Bulk Pesticides	PM.60.1.SD. through PM.60.14.SD.

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PM.2.</p> <p>MISSING CHECKLIST ITEMS</p> <p>PM.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
PM.5. PESTICIDE APPLICATORS PM.5.1.SD. Commercial applicators using restricted-use pesticides must be appropriately certified (SDAR 12:56:04:01 through 12:56:04:12:04).	<p>Verify that commercial applicators using or supervising the use of restricted-use pesticides are certified as follows:</p> <ul style="list-style-type: none"> - for use on lands used in the production of agricultural crops, including but not limited to feed grains, soybeans, forage, vegetables, small fruits, tree fruits, and nuts, as well as on grasslands and non-crop agricultural lands, applicators are certified for agricultural plant pest control - for use on animals, including but not limited to beef cattle, dairy cattle, swine, sheep, horses, goats, poultry and other livestock and to places on or in which animals are confined, applicators are certified for agricultural animal pest control - for use in forests, forest nurseries, and forest seed-producing areas, applicators are certified for forest pest control - to control pests in the maintenance and production of ornamental trees, shrubs, flowers, and turf, applicators are certified for ornamental and turf pest control - for use on seeds, applicators are certified for seed treatment - for purposeful applied to standing or running water, excluding commercial applicators engaged in public health-related activities, applicators are certified for aquatic pest control - in the maintenance of rights-of-way, including but not limited to public roads, electric power lines, pipelines, and railway rights-of-way, applicators are certified for right-of-way pest control. - for use in, on, or around food handling establishments, human dwellings, institutions such as schools and hospitals, industrial establishments including but not limited to warehouses, grain elevators, adjacent structures and areas public or private, and for the protection of stored, processed, or manufactured products, applicators are certified for industrial, institutional, structural, and health-related pest control. - for use in public health programs for the management of control of pests having medical and public health importance, applicators are certified for public health pest control - for use in the control of regulated pests under state or federal quarantine, applicators are certified for regulatory pest control - for use in demonstrations to the public their proper use and methods of application, applicators are certified for demonstration pest control - for use in the control of rodents or birds, applicators are certified for rodent and bird pest control - for use in control of predators, applicators are certified for predator pest control - for use on stored grain or grain in transit to control pests, applicators are certified for grain fumigation pest control - for use in the control of pests that damage or destroy wood, applicators are

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PM.5.2.SD. An operator's license is not transferable (SDAR 12:56:08:04)</p>	<p>certified for wood preservative pest control - commercial applicators using the restricted use livestock protection collar for control of coyote predation are certified for the use of the livestock protection collar.</p> <p>Verify that licensed applicators are certified and licensed to use any pesticide in their classification.</p> <p>Verify that if a licensed operator changes employers, the license becomes invalid and must be renewed.</p>
<p>PM.5.3.SD. Private pesticide applicators must be certified (SDAR 12:56:12:02) [Citation Revised February 2007].</p>	<p>Verify that private pesticide applicators are certified.</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
PESTICIDE APPLICATION <p>PM.20. Agriculture</p> <p>PM.20.1.SD. Chemigation users must meet certain requirements (SDAR 74:02:09:02).</p>	<p>Verify that a person applying any chemical through an irrigation system provides the following information to the Chief Engineer prior to using chemigation:</p> <ul style="list-style-type: none"> - the water permit or right number issued pursuant to SDCL 46-1-14 - the name, address, and telephone number of the water permit or right owner - the name, address, and telephone number of the system operator if not the same as the water permit or right owner - the legal description of the lands on which the system is located. <p>Verify that functional antipollution devices are installed and maintained.</p> <p>Verify that records are maintained of the dates and hours that a chemical is applied and the name and quantity of the chemical used.</p> <p>Verify that the records are provided to the Chief Engineer with the annual irrigation questionnaire.</p>
<p>PM.20.2.SD. Irrigation distribution systems through which chemigation is performed must be equipped with specific mechanical devices (SDAR 74:02:09:03 and 74:02:09:04) [Revised February 2007].</p>	<p>Verify that any irrigation distribution system through which chemigation is performed is equipped with the following mechanical devices:</p> <ul style="list-style-type: none"> - pipeline check valve (see PM.20.3.SD.) - vacuum relief valve (see PM.20.4.SD.) - automatic low pressure drain (see PM.20.5.SD.) - chemical injection line check valve (see PM.20.6.SD.) - interlocking irrigational pump and chemical injection pump (see PM.20.7.SD.) - inspection port (see PM.20.8.SD.). <p>(NOTE: Open discharge systems are exempted from this requirement).</p> <p>Verify that the equipment is installed in accordance with the manufacturer's specifications and at the location specified.</p> <p>Verify that the equipment is designed and constructed of materials suitable for chemigation, including chemical compatibility, as specified on the chemical label or by the equipment manufacturer.</p>
<p>PM.20.3.SD. The irrigation</p>	<p>Verify that the irrigation pipeline check valve is located in the pipeline between</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>pipeline check valve on the chemigation system must meet certain specifications (SDAR 74:02:09:05).</p> <p>PM.20.4.SD. The vacuum relief valve on the chemigation system must meet certain specifications (SDAR 74:02:09:06).</p> <p>PM.20.5.SD. The automatic low pressure drain on the chemigation system must meet certain specifications (SDAR 74:02:09:07).</p> <p>PM.20.6.SD. The chemical injection line check valve on the chemigation system must meet certain specifications (SDAR 74:02:09:08).</p> <p>PM.20.7.SD. The functional systems interlock on the</p>	<p>the irrigation pump and the point of chemical injection into the irrigation pipeline.</p> <p>Verify that the vacuum relief valve is located on the top of the pipeline between the irrigation pump and the irrigation pipeline check valve.</p> <p>Verify that the valve is sized in accordance with the manufacturer's specifications.</p> <p>Verify that the low-pressure drain is located on the bottom of the horizontal pipeline between the irrigation pump and the irrigation pipeline check valve.</p> <p>Verify that the valve is sized in accordance with the manufacturer's specifications.</p> <p>Verify that the drain meets the following specifications:</p> <ul style="list-style-type: none"> - has an orifice of at least three-quarter inch diameter - does not extend into the horizontal pipe beyond the inside surface of the bottom of the pipe - is at least 2 in. above grade - opens automatically when the pipeline water flow stops. <p>Verify that a tube, pipe, or similar conduit is used to discharge the solution at least 20 ft. from the irrigation water source.</p> <p>Verify that the solution shall be contained and prevented from entering the water supply source.</p> <p>Verify that the chemical injection line check valve is located between the point of chemical injection into the irrigation pipeline and the chemical injection pump.</p> <p>Verify that, unless a positive displacement pump is utilized, a second chemical injection line check valve is also be located between the point of chemical injection into the irrigation pipeline and chemical injection pump.</p> <p>Verify that the valve or valves are designed to have a minimum opening (cracking) pressure of 10 lb/in².</p> <p>Verify that the irrigation pump and the chemical injection pump are interlocked so</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
chemigation system must meet certain specifications (SDAR 74:02:09:09). <p>PM.20.8.SD. The inspection port on the chemigation system must meet certain specifications (SDAR 74:02:09:10).</p> <p>PM.20.9.SD. The chemigation system operator must keep the system in good operating condition (SDAR 74:02:09:11 and 74:02:09:12.)</p> <p>PM.20.10.SD. The chemigation system operator must follow all requirements on the chemical product label (SDAR 74:02:09:13 and 74:02:09:14).</p> <p>PM.20.11.SD. The chemigation operator must meet reporting requirements for spills, accidents, and system malfunctions (SDAR 74:02:09:15).</p>	that if the irrigation pump stops, the injection pump will also stop. Verify that the inspection port is located on the pipeline between the irrigation pump and the irrigation pipeline check valve. (NOTE: The vacuum relief valve connection may serve as the inspection port.) Verify that the inspection port or viewing device is situated in such a manner that the inlet to the low-pressure drain can be observed. Verify that there is a minimum 4-in orifice or viewing area. Verify that the operator of the irrigation system keeps the system in good operating condition and ensures that the chemigation and safety equipment is operating properly before injecting chemical into the irrigation system. Verify that the operator of the irrigation system calibrates the system prior to starting the injection of chemical into the irrigation system. Verify that the operator of the system follows all requirements on the chemical product label. Verify that the operator posts warning signs as specified on the label of the chemical product being used at the time of application. Verify that the operator of a chemigation system reports immediately to the Chief Engineer through the South Dakota Division of Emergency Management's 24-hr telephone number, (605) 773-3231 (and to local agencies as prescribed by local emergency planning committees) all spills, accidents, system malfunctions, or other situations involving actual or potential contamination of either groundwater or surface water.

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
PESTICIDE APPLICATION <p>PM.40. Documentation</p> <p>PM.40.1.SD. Commercial applicators must keep records of each application (SDAR 12:56:07:01).</p> <p>PM.40.2.SD. Licensed public applicators must complete daily application records and keep them for 3 yr (SDAR 12:56:07:02).</p> <p>PM.40.3.SD. Commercial applicators must keep application records for 3 years and make those records available to the Department (SDAR 12:56:07:03) [Revised February 2007].</p>	<p>Verify that each commercial applicator keeps records of each application that include the following:</p> <ul style="list-style-type: none"> - name and address of the person for whom the pesticide was applied - location of the land or property where the pesticide was applied - pest to be treated - acreage, area, or number of plants or animals treated or other appropriate description - year, month, day, and time the pesticide was applied - person or firm who applied the pesticide - trade or brand name and common name of the pesticide applied - company name appearing on the product label - weather conditions at the time of application including direction and estimated velocity of the wind and the temperature at the time the pesticide was applied (this requirement does not apply to application of baits in bait stations or pesticide applications in or immediately adjacent to structures) - amount of the pesticide applied and concentration in pounds or gallons per unit or percentages of active ingredient per unit of the pesticide used - specific crop or designated site or commodity to which pesticide application was made - name and address of the applicator. <p>Verify that each licensed public operator and licensed applicator has all pesticide application records completed and available to the Department for inspection at the close of each day.</p> <p>Verify that records of pesticide applications made by each commercial applicator or the applicator's operators are kept by the applicator for 3 yr from the date of the application.</p> <p>Verify that, upon written request, the Department is furnished a copy of the records (see PM.40.1.SD.).</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
PM.40.4.SD. Licensed applicators must make application records available to the customer at his request (SDAR 12:56:07:04).	Verify that, upon written request, each licensed applicator provides the customer with a record of each application of pesticide applied to the customer's land.

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
PM.45. STORAGE/MIXING/ HANDLING	<p>PM.45.1.SD. Certain pesticide storage procedures are prohibited (SDAR 12:56:02:02) [Revised February 2007].</p> <p>Verify that pesticides and pesticide containers are stored so that there is no open dumping, open burning, or water dumping.</p> <p>(NOTE: The open burning by the user of small quantities of combustible containers that do not exceed more than one day's accumulation or more than 50 pounds of combustible containers and that formerly contained organic or metallo-organic pesticides, except organic mercury, lead, cadmium, beryllium, selenium, or arsenic compounds, is acceptable.)</p> <p>Verify that pesticides and pesticide containers are not stored next to food or other articles intended for consumption by humans or animals.</p>
PM.45.2.SD. Pesticide operational areas must be registered with the Department (SDAR 12:56:17:07 and 12:56:17:08).	<p>Verify that each pesticide operational area using operational area containment is registered with the department.</p> <p>Verify that the owner corrects any deficiencies as set forth by the department.</p> <p>Verify that plans and specifications for pesticide operational areas required to be registered are submitted to the Secretary for review and approval at least 60 days before construction begins.</p> <p>Verify that the operational area installation and operation are in accordance with approved plans and specifications.</p>
PM.45.3.SD. Pesticide operational areas must prevent backflow from contaminating potable water supplies (SDAR 12:56:17:10).	<p>Verify that potable water supply lines are not connected to process water lines, chemical lines, or equipment unless backflow prevention is installed.</p> <p>Verify that backflow prevention consists of one of the following:</p> <ul style="list-style-type: none"> - a reduced-pressure principle device which meets the American Water Works Association Standard C511-89 (September 1, 1990) for backflow prevention devices - air gap separation.
PM.45.4.SD. Pesticide	<p>Verify that there is containment whenever an operational area is the applicator's</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>operational areas must have containment when certain circumstances occur (SDAR 12:56:17:01).</p> <p>PM.45.5.SD. Pesticide operational area containment must meet operational and design standards (SDAR 12:56:17:02).</p>	<p>principal operational area and either of the following conditions occur:</p> <ul style="list-style-type: none"> - more than a total of 1500 lb of pesticide active ingredients are transferred, loaded, unloaded, mixed, repackaged, or refilled during a calendar year - there are more than 30 accumulated days in a calendar year during which concentrate or diluted pesticides are cleaned, washed, or rinsed from containers or from application, handling, storage, or transportation equipment. <p>(NOTE: 2 or more operational areas under common ownership and control within one-half mile of each other are calculated collectively to determine if the 2 thresholds listed above have been reached.)</p> <p>(NOTE: Except for pressure wood preserving operational areas, the 2 thresholds listed above do not apply to those operational areas located within or immediately adjacent to each pesticide application site.)</p> <p>Verify that there is containment whenever an operational area is within any of the following distances:</p> <ul style="list-style-type: none"> - 150 ft of a lake, stream, streambed or wetland - 150 ft of a well - 200 ft of populated buildings, either commercial or residential premises, excluding the owner or operator's own residential or commercial buildings - 500 ft of a well used as a public water supply. <p>(NOTE: The last 2 distances listed above do not apply to mixing and loading operations conducted by pesticide applicators utilizing containers and equipment with holding capacities of 10 U.S. gallons or less or 50 lb net dry weight or less.)</p> <p>Verify that operational area activities are carried out in a manner that prevents escape of discharges that may result in unreasonable adverse effects on the environment.</p> <p>Verify that operational area activities are carried out on an impervious surface that is designed to catch and contain any discharges in the operational area.</p> <p>Verify that operational area containment is constructed in accordance with professional engineering practices which include the following:</p> <ul style="list-style-type: none"> - the material used is of sufficient thickness and strength to withstand the weight and movement of any equipment that may be placed or parked within the operational area containment - all seams and cracks are sealed - the operational area containment is constructed of concrete or other materials approved by the Secretary prior to construction or installation.

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PM.45.6.SD. Applicators must have and follow written pesticide handling and discharge response procedures and plans (SDAR 12:56:17:03).</p>	<p>(NOTE: If materials other than concrete are used, information must be provided to the Secretary which includes chemical compatibility, permeability, and physical characteristics of materials proposed to assure operational area containment integrity under conditions of proposed use. A written confirmation of compatibility of synthetic materials must be kept at the operational area or at the nearest local office of the operator.)</p> <p>Verify that operational area containment for liquid pesticides, including container and equipment rinsates, meets the following requirements:</p> <ul style="list-style-type: none"> - the operational area containment is curbed or sloped to contain discharges so as to facilitate recovery of discharged materials and to prevent liquids from adjacent surfaces from flowing onto the operational area containment - the operational area containment is of sufficient capacity and surface area to contain discharges from the single largest container or application system operated or cleaned within the operational area and to prevent spillage onto unprotected areas - a minimum containment capacity of 250 U.S. gallons is provided. <p>Verify that operational area containment for nonliquid pesticides meets the following requirements:</p> <ul style="list-style-type: none"> - extends beneath any conveyors or augers used in operational area activities unless the conveyors or augers are fully enclosed and constructed to prevent discharge - of adequate surface area to contain discharges from the largest container or equipment operated within the operational area containment - constructed to prevent liquids from adjacent surfaces from flowing onto the operational area containment. <p>Verify that discharges and other accumulated materials are promptly recovered from the operational area containment.</p> <p>Verify that accumulated liquids or materials containing pesticides are disposed of in accordance with general storage and disposal procedures for pesticides.</p> <p>Verify that accumulations of precipitation are discharged from the operational area containment as surface runoff if the operational area containment was cleaned after the last use.</p> <p>Verify that all private and commercial applicators have a written pesticide handling and discharge response plan for operational area activities.</p> <p>Verify that the pesticide handling and discharge response plan contains the following information:</p> <ul style="list-style-type: none"> - methods and procedures for the transfer, loading, unloading, mixing, repackaging, and refilling of pesticide containers and pesticide application

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PM.45.7.SD. Employees involved in the use and handling of pesticides in operational areas must receive handling and discharge response plan training. (SDAR 12:56:17:04).</p>	<p>Verify that the plan is current at all times and available for use.</p> <p>Verify that a copy of the plan is available for inspection by the Department at either the operational area or the applicator's nearest local office or the location from which the operational area is administered.</p> <p>Verify that all private and commercial applicators that own or operate an operational area conduct pesticide handling and discharge response plan training for all new and existing employees involved in the use and handling of pesticides.</p> <p>Verify that the employees involved in pesticide use and handling receive training no later than 3 days after beginning pesticide use and handling duties.</p> <p>Verify that training is conducted at least annually.</p>
<p>PM.45.8.SD. Pesticide discharges must be recovered, stored, and used in accordance with certain requirements (SDAR 12:56:17:05).</p>	<p>Verify that all discharges within and outside of operational area containment are immediately recovered using absorbent materials, pumps, or similar means.</p> <p>Verify that operational area containment surfaces exposed to concentrated and diluted pesticides are periodically cleaned and all rinsates recovered and stored in accordance with general pesticide storage regulations.</p> <p>Verify that recovered discharges are not stored below ground.</p> <p>Verify that containers larger than 300 U.S. gal that contain recovered discharges or rinsates for more than 14 consecutive days are located within secondary containment constructed and maintained in accordance with the construction and capacity requirements of for bulk pesticides.</p> <p>Verify that recovered discharges are used in accordance with the applicable</p>

COMPLIANCE CATEGORY:
PESTICIDE MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PM.45.9.SD. Pesticide discharges outside the operational area must be studied for residues and documented (SDAR 12:56:17:05 and 12:56:17:06).</p>	<p>pesticide product labels.</p> <p>Verify that, upon recovery of discharges outside of operational area containment that are in excess of 25 lb active ingredients, samples are taken and analyzed for applicable pesticide residues.</p> <p>Verify that the samples are taken from the area where the discharge occurred and recovery was completed at a depth and surface area sufficient to show that the recovery was complete.</p> <p>Verify that the owner/operator of the operational area provides written documentation to the Department describing the cause of the discharge, recovery and sampling procedures, analysis reports, and disposition of the recovered materials within 30 days following the date the discharge occurred.</p> <p>Verify that pesticide discharges in excess of 25 lb active ingredients that occur at operational areas outside of operational area containment are reported to the department.</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
PM.55. DISPOSAL	<p>Verify that pesticides are disposed of by one of the following methods:</p> <ul style="list-style-type: none"> - used for the legal purpose originally intended, at the prescribed dosage - returned to the manufacturer - if applicable, disposed as described in PM.55.3.SD. <p>(NOTE: Pesticides and single containers of pesticides designed for use in the home and garden, if disposed of singly during routine solid waste disposal at a sanitary landfill, are not covered by this section.)</p>
PM.55.2.SD. Certain pesticide disposal procedures are prohibited (SDAR 12:56:02:02).	<p>Verify that pesticides are disposed of so that there is no open dumping, open burning, or water dumping of pesticides.</p> <p>(NOTE: Pesticides and single containers of pesticides designed for use in the home and garden, if disposed of singly during routine solid waste disposal at a sanitary landfill, are not covered by this section.)</p>
PM.55.3.SD. Pesticide disposal procedures for organic and metallo-organic pesticides must follow certain requirements (SDAR 12:56:02:03).	<p>(NOTE: These procedures apply to the disposal of organic and metallo-organic pesticides, except organic mercury, lead, cadmium, beryllium, selenium, arsenic compounds.)</p> <p>Verify that metallo-organic pesticides are not incinerated until after the heavy metals are recovered from the hydrocarbon chain.</p> <p>Verify that metallo-organic pesticides are incinerated in a pesticide incinerator.</p> <p>Verify that organic pesticides not containing metals are incinerated in a pesticide incinerator.</p> <p>Verify that, in lieu of incineration, the pesticides are disposed of by burial in a specially designated landfill.</p> <p>Verify that, if specially designated landfill facilities are not available, the soil injection method is used.</p> <p>Verify that, if soil injection methods of disposal are not available, chemical methods and procedures are used to degrade pesticides to forms that are not hazardous to the environment.</p> <p>(NOTE: Residue and rinse liquids which are not added to spray mixtures in the</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PM.55.4.SD. Pesticide disposal procedures for organic mercury, lead, cadmium, arsenic, beryllium, selenium, and all inorganic pesticides must follow certain requirements (SDAR 12:56:02:04).</p>	<p>field shall be disposed of in the manner prescribed for the specific type of pesticide described above.)</p> <p>Verify that, to dispose of organic mercury, lead, cadmium, beryllium, selenium, arsenic, and all inorganic pesticides, they are chemically deactivated by converting them to nonhazardous compounds and the heavy metal resources recovered.</p> <p>Verify that, if chemical deactivation facilities are not available, these pesticides are encapsulated and buried in a specially designated landfill.</p> <p>Verify that records sufficient to permit location of the encapsulated and buried pesticides for retrieval are maintained at the landfill site in an approved manner.</p> <p>Verify that, if neither chemical deactivation nor encapsulation is available, these pesticides are placed in containers and stored temporarily until disposal facilities or procedures are available.</p> <p>(NOTE: Residue and rinse liquids which are not added to spray mixtures in the field shall be disposed of in the manner prescribed for the specific type of pesticide described above.)</p>
<p>PM.55.5.SD. Pesticides identified as hazardous wastes must be disposed of in accordance with hazardous waste procedures (SDAR 12:56:02:04:01).</p>	<p>Verify that any pesticide that has been identified as a hazardous waste is disposed of in accordance with departmental procedures for hazardous wastes.</p> <p>(NOTE: Residue and rinse liquids which are not added to spray mixtures in the field shall be disposed of in the manner prescribed for the specific type of pesticide described above.)</p>
<p>PM.55.6.SD. Disposal of pesticide containers and residues must meet certain requirements (SDAR 12:56:02:02 and 12:56:02:05).</p>	<p>Verify that pesticide containers are disposed of so that there is no open dumping, open burning, or water dumping.</p> <p>(NOTE: Open burning of pesticide containers by the pesticide user is acceptable under the following conditions:</p> <ul style="list-style-type: none"> - the quantity of combustible containers burned does not exceed a daily volume of 50 lb - the containers formerly contained organic or metallo-organic pesticides, except organic mercury, lead, cadmium, beryllium, selenium, or arsenic compounds.) <p>Verify that containers which formerly contained organic mercury, lead, cadmium, beryllium, selenium, or arsenic or inorganic pesticides which have been triple rinsed and punctured to facilitate drainage are disposed of by any of the following</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>3 methods:</p> <ul style="list-style-type: none"> - buried in open fields if the containers do not exceed a daily volume of 50 lb and the burial is done by the user of the pesticide - in a sanitary landfill - punctured and sold for scrap. <p>Verify that containers which formerly contained organic mercury, lead, cadmium, beryllium, selenium, or arsenic, or inorganic pesticides which are unrinsed are disposed of by any of the following 3 methods:</p> <ul style="list-style-type: none"> - buried in open fields if: <ul style="list-style-type: none"> - the containers do not exceed a daily volume of 50 lb - light soil texture and subsurface water are not factors - mindful of environmental considerations - the burial is done by the user of the pesticide - in a specially designated landfill - incinerated in a pesticide incinerator. <p>Verify that containers which formerly contained organic pesticides and metallo-organic pesticides, except organic mercury, lead, cadmium, beryllium, selenium, or arsenic compounds, are disposed of by any of the following 4 methods:</p> <ul style="list-style-type: none"> - burned, if the containers do not exceed a daily volume of 50 lb - buried in open fields if: <ul style="list-style-type: none"> - the containers do not exceed a daily volume of 50 lb - light soil texture and subsurface water are not factors - mindful of environmental considerations - the burial is done by the user of the pesticide - in a specially designated landfill - incinerated in a pesticide incinerator - returned to the manufacturer for reconditioning when the manufacturer will accept such containers. <p>Verify that containers which formerly contained pesticides that have been identified as hazardous wastes are disposed of in accordance with departmental procedures for hazardous wastes.</p>
PM.55.7.SD. Preregistration is required for pesticide collection (SDAR 12:56:18:03).	<p>Verify that pesticides to be collected are preregistered on a form provided by the secretary.</p> <p>(NOTE: The secretary will notify the applicant of the eligibility of the pesticides for disposal under the program at least 15 days before the date of collection.)</p>
PM.55.8.SD. Pesticide containers must meet	Verify that pesticide containers for recycling meet the following minimum

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
minimum requirements to be acceptable for recycling (SDAR 12:56:18:02).	<p>requirements:</p> <ul style="list-style-type: none"> - be triple-rinsed or equivalent - consist of high density polyethylene (HDPE) plastic of 2 1/2 gal capacity or less - contain no visible pesticide residue inside or outside of the container - contain no more than 0.5 fluid oz of clear water - when possible, be delivered with labels on the container. <p>(NOTE: If the container held crop oil, a nutritional spray, an adjuvant or surfactant, or a Bacillus thuringensis product as the sole active ingredient, the presence of residue will not disqualify it for acceptance).</p>
PM.55.9.SD. Pesticide collection and container recycling activities must meet specific requirements (SDAR 12:56:18:04).	<p>Verify that the site for collection is selected based on the following criteria:</p> <ul style="list-style-type: none"> - security - distance to water sources, residences, and institutions - geographic distribution of collection sites within the state - potential number of containers and amount of pesticides to be collected in a given area - availability of volunteers to assist with collection - accessibility of the site to the public. <p>Verify that the collection site where containers and pesticides are inspected and processed is protected by an impervious containment area.</p> <p>Verify that individual volunteers participating and assisting in collection are at least 18 yr of age and receive training in safety, proper inspection and handling of containers and pesticides, and any other applicable aspects of collection.</p> <p>Verify that the Secretary or a designee oversees the collection of pesticide containers and waste pesticides at each collection site.</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PM.60.</p> <p>BULK PESTICIDES</p> <p>PM.60.1.SD. Pesticide storage containers capable of holding more than 300 gal must be located within a bulk storage facility (SDAR 12:56:13:01).</p> <p>PM.60.2.SD. Bulk pesticide storage facilities must have a valid permit (SDAR 12:56:13:05.01).</p> <p>PM.60.3.SD. Bulk pesticide storage facilities must have secondary containment that meets specific requirements (SDAR 12:56:13:03) [Revised February 2007].</p>	<p>Verify that individual permanent pesticide storage containers capable of holding more than 300 gal are located within a bulk pesticide storage facility.</p> <p>Verify that a bulk pesticide storage facility has a valid permit prior before the facility begins operation.</p> <p>Verify that a bulk pesticide storage facility for the storage of permanent bulk pesticide storage containers has a means of secondary containment.</p> <p>Verify that the walls and base of the secondary containment are constructed to withstand loading conditions and the discharge of maximum tank capacity considering the full hydrostatic head of the discharged liquid by one of the following means:</p> <ul style="list-style-type: none"> - a synthetic liner at least 30 mils thick beneath 12 in. of compacted clay soil - concrete, excluding blocks and bricks, of sufficient thickness and strength - steel of sufficient thickness and strength - cross-linked polyolefin of sufficient thickness and strength. <p>Verify that the capacity of the containment area is capable of holding 110 percent of the volume of the largest container plus the volume of the butts of all the other tanks inside it.</p> <p>Verify that all seams and cracks are sealed.</p> <p>Verify that each cross-linked polyolefin containment structure is permanently marked with an embossment or with a metal certification plate permanently affixed to it.</p> <p>Verify that the marking certifies that the containment structure contains the words "meets specification of ARSD 12:56:13:03" and the date of manufacture including month and year.</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PM.60.4.SD. Bulk storage facilities must not be located where there is a threat of damage to water supplies (SDAR 12:56:13:04).</p>	<p>Verify that bulk pesticide storage facilities are not located in areas where spillage, loading, unloading, or secondary containment failure will threaten or cause damage to streams or water supplies or in an area subject to flooding.</p>
<p>PM.60.5.SD. Underground bulk pesticide storage is prohibited (SDAR 12:56:13:09).</p>	<p>Verify that no underground bulk storage is used beyond a sealed catch basin used for the temporary collection of runoff or rinsate from transfer and loading areas.</p>
<p>PM.60.6.SD. Spills outside a bulk storage facility containment area must be reported immediately (SDAR 12:56:13:10).</p>	<p>Verify that the operator/ manager of a bulk storage facility notifies the Department or the Division of Emergency and Disaster Services within 3 h after a spill of more than 25 gal of liquid or 500 lb of dry pesticides outside the secondary containment area.</p>
<p>PM.60.7.SD. Bulk pesticides must be transported in accordance with specific requirements (SDAR 12:56:03:03).</p>	<p>Verify that bulk pesticide storage containers being transported meet the following 3 requirements:</p> <ul style="list-style-type: none"> - they are secured to prevent significant movement - they prominently bear the registered product label for the pesticide they contain - they comply with all Department of Commerce regulation requirements
<p>PM.60.8.SD. Each bulk pesticides must have a separate dispensing system (SDAR 12:56:14:01.01).</p>	<p>Verify that, for each bulk pesticide, there is a separate dispensing system, such as hosing and piping.</p> <p>Verify that such distribution systems are constructed of materials and in a manner compatible with the physical and chemical properties of the pesticide being stored.</p>
<p>PM.60.9.SD. Bulk pesticides must be properly labeled (SDAR 12:56:14:02).</p>	<p>Verify that all bulk pesticide storage containers in the proximity of the outlet have a prominently affixed registered product label.</p> <p>Verify that all bulk pesticides used for custom mixing, tank mixing, or repackaging are registered and labeled.</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PM.60.10.SD. Bulk pesticides must be handled and loaded in a manner that will prevent their spillage or discharge (SDAR 12:56:15:01).</p>	<p>Verify that bulk pesticides are handled and loaded in a manner that will prevent their spillage or discharge.</p>
<p>PM.60.11.SD. Minor spills from bulk pesticides must be disposed of according to certain requirements (SDAR 12:56:15:03).</p>	<p>Verify that minor spills of pesticide or rinsate that have occurred from the handling, loading, or cleansing of bulk containers and which accumulate in the secondary containment area are disposed of as provided by the pesticide label.</p> <p>Verify that, if the spillage is contaminated or unfit for reuse or disposal according to label directions, the operator complies with the general storage and disposal procedures for pesticides.</p>
<p>PM.60.12.SD. Bulk storage containers must be thoroughly cleaned according to the manufacturer's specifications (SDAR 12:56:15:02).</p>	<p>Verify that bulk storage containers are thoroughly cleaned according to the manufacturer's specifications before refilling, unless a sealed or dedicated reusable bulk container is refilled with a pesticide product bearing the same label.</p>
<p>PM.60.13.SD. The Department must be notified prior to an establishment's initial receipt of bulk pesticides for bulk repackaging (SDAR 12:56:14:04).</p>	<p>Verify that the Department is notified prior to the initial bulk shipment of pesticides to any establishment for bulk repackaging.</p> <p>Verify that notification is made annually by the manufacturer or registrant on forms provided by the secretary, and includes the following:</p> <ul style="list-style-type: none"> - the name and address of each establishment receiving such a delivery - a certificate of authorization from the registrant to repack the pesticides including permission to utilize registered product labels on bulk containers - the EPA registration number of each pesticide to be repackaged. <p>(NOTE: Information obtained by the Department pursuant to this section shall not be disclosed without written permission of the manufacturer or registrant.)</p>
<p>PM.60.14.SD. Bulk repackaging for distribution must meet the following requirements (SDAR 12:56:14:05).</p>	<p>Verify that the establishment receiving the transfer or delivery of the bulk pesticide is registered.</p> <p>Verify that a written letter of authorization for bulk repackaging from the registrant is on file at each repackaging establishment.</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>Verify that a representative of the receiving establishment is present both when the product is received and when it is repackaged for sale.</p> <p>Verify that there is no change in the following:</p> <ul style="list-style-type: none"> - pesticide formulation - product labeling, except for the addition of the assigned EPA establishment number of the repackaging site and the net contents statement - identity of the manufacturer or registrant accountable for the integrity of the product, as evidenced by the assigned EPA product registration number. <p>Verify that containers and accessory equipment used for the storage and handling of bulk pesticides is of materials and construction compatible with the pesticide stored and the conditions of storage as specified by label instructions.</p>

SECTION 8

PETROLEUM, OIL, AND LUBRICANT (POL) MANAGEMENT

South Dakota Supplement, February 2010

This section covers the state requirements for POL Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Definitions

- *Action Levels* - numeric values or other performance criteria that are protective of human health, which if reached or exceeded, require further assessment or corrective action (South Dakota Administrative Rules (SDAR) 74:56:05:01) [Citation Revised February 2007].
- *Chemicals of Concern* - specific constituents that are identified for evaluation in the risk assessment process as provided for in section 74:03:33:04 (SDAR 74:56:05:01) [Citation Revised February 2007].
- *Corrective Action* - the sequence of actions at a petroleum release site that include site assessment, interim remedial action, remedial action, operation and maintenance of equipment, monitoring of progress, and termination of the remedial action (SDAR 74:56:05:01) [Citation Revised February 2007].
- *Excavation Area* - the area containing the tank system and backfill material bounded by the ground surface, the walls and floor of the pit, and the trenches into which the underground storage tank system was placed at the time of installation or two feet around the underground storage tank system if the limits of the original excavation cannot be determined (SDAR 74:56:05:01) [Citation Revised February 2007].
- *Exposure* - contact of an organism with a chemical of concern (SDAR 74:56:05:01) [Citation Revised February 2007].
- *Exposure Assessment* - the estimation, qualitative or quantitative, of the magnitude, frequency, and duration of exposure to a chemical of concern, and the route of exposure (SDAR 74:56:05:01) [Citation Revised February 2007].
- *Free Phase Product* - pure petroleum product floating on the groundwater (SDAR 74:56:05:01) [Citation Revised February 2007].
- *Middle Distillate Total Petroleum Hydrocarbons* - petroleum products with boiling point ranges from 190^oC to 360^oC, such as diesel fuels, heating fuels, kerosene, motor oil, waste oil, transformer oil, crude oil, aviation fuel, and similar substances (SDAR 74:56:05:01) [Citation Revised February 2007].
- *Volatile* - petroleum products with boiling point ranges from 20^oC to 190^oC, such as gasoline's, gasohol, aviation gas, jet fuel, and similar substances (SDAR 74:56:05:01) [Citation Revised February 2007].

**PETROLEUM, OIL, AND LUBRICANT (POL) MANAGEMENT
GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS**

REFER TO CHECKLIST ITEMS:

Missing Checklist Items
State-Specific POL Requirements

PO.2.1.SD.
PO.100.1.SD. through PO.100.10.SD.

COMPLIANCE CATEGORY:
PETROLEUM, OIL, AND LUBRICANT (POL) MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PO.2.</p> <p>MISSING CHECKLIST ITEMS</p> <p>PO.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY:
PETROLEUM, OIL, AND LUBRICANT (POL) MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PO.100.</p> <p>STATE-SPECIFIC POL REQUIREMENTS</p> <p>PO.100.1.SD. Soil from petroleum release sites must be analyzed for specific chemicals (SDAR 74:56:05:04 and 74:56:05:05) [Citation Revised February 2007].</p>	<p>Verify that soil samples from petroleum release sites are analyzed for the following chemicals of concern, based on the nature of the product released, using an EPA-approved laboratory method:</p> <ul style="list-style-type: none"> - if the release is known or suspected to be a volatile, analyze for benzene, toluene, ethylbenzene, xylene, and total petroleum hydrocarbons - if the release is known or suspected to be a middle distillate total petroleum hydrocarbon, analyze for naphthalene and total petroleum hydrocarbons; in addition: <ul style="list-style-type: none"> - if the release is known or suspected to be waste oil, analyze for naphthalene, total petroleum hydrocarbons and toxicity characteristic leaching procedure metals - if the release is known or suspected to be transformer oil, analyze for naphthalene, total petroleum hydrocarbons and polychlorinated biphenyls - if the Department determines that other contaminants may exist in quantities that may adversely affect structures; utility, sewer, and water supply lines; human receptors; surface water; or groundwater, the Department may require the responsible person to test for and monitor those contaminants. <p>(NOTE: Petroleum-contaminated soils must be analyzed for total petroleum hydrocarbons by the California/U. S. geological survey method published in "Draft Method for Total Petroleum Hydrocarbons and Total Organic Lead," February 1988. Soils contaminated with waste oil must be analyzed for total petroleum hydrocarbons by EPA method 418.1 as published in EPA's "Methods for Chemical Analysis of Water and Wastes" 1983. The Department may approve an alternative method that has detection limits, precision and accuracy that are at least equivalent to the specified method. Approved methods must quantify total petroleum hydrocarbons by integrating all detectable peaks within the time period in which at least 95 percent of the recoverable hydrocarbons are eluted.)</p>
<p>PO.100.2.SD. Facilities must conduct Tier 1 assessments of petroleum-contaminated sites (SDAR 74:56:05:06) [Citation Revised February 2007].</p>	<p>Verify that a Tier 1 assessment of soils is conducted at the site of a petroleum release.</p> <p>(NOTE: A Tier 1 assessment is a risk-based analysis to develop values that are not site-specific for direct and indirect exposure pathways utilizing conservative exposure factors and fate and transport for potential pathways. Based upon the results of this assessment, the facility may be required to develop and implement remediation programs, or progress to Tier 2 or Tier 3 assessments.)</p>

COMPLIANCE CATEGORY:
PETROLEUM, OIL, AND LUBRICANT (POL) MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PO.100.3.SD. Facilities must undertake corrective action or conduct Tier 2 assessments if Tier 1 action levels are exceeded (SDAR 74:56:05:07 through SDAR 74:56:05:09) [Citation Revised February 2007].</p>	<p>(NOTE: The Tier 1 action levels are:</p> <ul style="list-style-type: none"> - benzene, 0.2 ppm - toluene, 15 ppm - ethylbenzene, 10 ppm - xylene, 300 ppm - naphthalene, 25 ppm.) <p>Verify that, if soil contaminant levels exceed Tier 1 action levels:</p> <ul style="list-style-type: none"> - a corrective action plan is submitted to the Department for approval or, - if the site meets the criteria for a Tier 2 assessment Tier 2 action levels are calculated based on actual site conditions. <p>(NOTE: The criteria for progressing to a Tier 2 assessment are:</p> <ul style="list-style-type: none"> - the assumptions used to calculate the Tier 1 action levels are not applicable to actual site conditions - it is likely that Tier 2 action levels will be different from Tier 1 action levels - the cost of performing a Tier 2 assessment and implementation of corrective action to Tier 2 action levels is likely to be substantially less than the cost of corrective action under Tier 1.) <p>Verify that, if total petroleum hydrocarbon concentrations in soil exceed 500 parts per million, a Tier 2 assessment is initiated.</p>
<p>PO.100.4.SD. Facilities must undertake corrective action or conduct Tier 3 assessments if Tier 2 action levels are exceeded (SDAR 74:56:05:10 through SDAR 74:56:05:12) [Citation Revised February 2007].</p>	<p>(NOTE: A Tier 2 assessment is a risk-based analysis applying the direct exposure values established under a Tier 1 assessment at the point or points of exposure developed for a specific site and development of values for potential indirect exposure pathways at the point or points of exposure based on site-specific conditions. As part of a Tier 2 assessment, the responsible person must define the vertical and horizontal extent of soil contamination exceeding Tier 1 action levels and groundwater exceeding South Dakota groundwater quality standards.)</p> <p>Verify that Tier 2 action levels are calculated based on actual site conditions, as follows:</p> <ul style="list-style-type: none"> - toxicity information is obtained from sources consistent with EPA's "Risk Assessment Guidance for Superfund" (1989) - the excess lifetime cancer risk may not exceed 1:100,000 for all pathways - the chronic noncancer risk may not exceed a hazard index of one for all pathways - reasonable maximum exposure default values as determined in EPA's "Risk Assessment Guidance for Superfund" (1989) is used for exposure assessments or site-specific exposure data may be used with the permission of the Department.

COMPLIANCE CATEGORY:
PETROLEUM, OIL, AND LUBRICANT (POL) MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>(NOTE: “Tier 2 RBCA Guidance Manual for Risk-Based Corrective Action” (1995a; 1995b) is the source for fate and transport models for development of Tier 2 action levels. The Department shall approve the location of monitoring points to ensure compliance with the South Dakota groundwater quality standards and the conditions listed in this section.)</p> <p>Verify that, if soil contaminant levels exceed the Tier 2 action levels:</p> <ul style="list-style-type: none"> - a corrective action plan is submitted to the Department for approval, or - if the site meets the criteria listed below, the responsible person may calculate Tier 3 action levels using site-specific models. <p>(NOTE: The criteria for progressing to a Tier 3 assessment are:</p> <ul style="list-style-type: none"> - the assumptions used to calculate the Tier 2 action levels are not applicable to actual site conditions - it is likely that Tier 3 action levels will be different from Tier 2 action levels - the cost of performing a Tier 3 assessment and implementation of corrective action to Tier 3 action levels is likely to be substantially less than the cost of corrective action under Tier 2.)
PO.100.5.SD. Corrective actions for petroleum contaminated soils must be implemented if Tier 3 action levels are exceeded (SDAR 74:56:05:13 and SDAR 74:56:05:14) [Citation Revised February 2007].	<p>(NOTE: A Tier 3 assessment is a risk-based analysis to develop values for potential direct and indirect exposure pathways at the point or points of exposure based on site-specific conditions. As part of a Tier 3 assessment, the responsible person must define the vertical and horizontal extent of soil contamination exceeding Tier 1 action levels and groundwater exceeding South Dakota groundwater quality standards.</p> <p>Verify that Tier 3 action levels are calculated only with prior approval from the Department.</p> <p>(NOTE: The Department shall approve work plans for the development of Tier 3 action levels, and the location of monitoring points to ensure compliance with the South Dakota groundwater quality standards and the conditions listed in this section.)</p> <p>Verify that, if soil contaminant levels exceed the Tier 3 action levels corrective action is taken to reduce the risks associated with the site.</p>
PO.100.6.SD. Free phase product from petroleum contaminated soils must be removed immediately (SDAR 74:56:05:16) [Citation Revised February 2007].	Verify that, if present, as much free phase product is removed as practicable.

COMPLIANCE CATEGORY:
PETROLEUM, OIL, AND LUBRICANT (POL) MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
PO.100.7.SD. Adverse effects of petroleum vapors from petroleum-contaminated soils must be mitigated (SDAR 74:56:05:17) [Citation Revised February 2007].	Verify that, if adverse affects of petroleum vapors have occurred (or, in the opinion of the Department, may occur in the future corrective action consistent with the requirements of this chapter is taken.)
PO.100.8.SD. Petroleum-contaminated soils must be disposed of properly (SDAR 74:56:05:18 and SDAR 74:56:05:19) [Citation Revised February 2007].	Verify that, if petroleum-contaminated soil is removed from a site, it is disposed of in accordance with South Dakota solid waste regulations. (NOTE: Solid waste facilities must be permitted to receive petroleum-contaminated soils, must apply them in separate areas, and must remediate the soils to 100 ppm or less total petroleum hydrocarbons.) Verify that all visibly contaminated soil in the excavation area is removed and disposed of in accordance with solid waste regulations.
PO.100.9.SD. Unrecoverable petroleum-contaminated soils must be monitored (SDAR 74:56:05:20) [Citation Revised February 2007].	Determine if visibly contaminated soils or contaminated soils are unrecoverable and left in place under buildings, roads, or structures or are in contact with such features as sewer lines, utility lines, and water supply lines. Verify that the facility establishes a monitoring program. (NOTE: If the Department determines that contaminated soils left in place are a potential threat to human health and the environment, the facility must take measures to protect public health and the environment. Such measures may include in-situ remediation, ventilation, removal, or other applicable technologies as they become available. The Department may allow soils contaminated above site-specific standards to be left in place if physical constraints, other than those listed in this section, do not allow for complete removal.)
PO.100.10.SD. Petroleum-contaminated soils stored prior to disposal must meet specific storage requirements (SDAR 74:56:05:21 through 74:56:05:23) [Citation Revised February 2007].	Verify that, if circumstances prohibit disposal within 72 hrs after excavation, the facility notifies the Department and stores the contaminated soils on-site as follows: <ul style="list-style-type: none"> - the facility places all contaminated soils on a minimum 10-mil, single layer or composite, synthetic membrane liner - the liner is installed undamaged on a surface free of angular rocks, roots, and other materials that may damage the integrity of the liner - once the liner has been installed, the facility dikes the liner to prevent surface runoff and prevent movement of the liner - when stockpiling is completed, the facility covers soils with a minimum 10-

COMPLIANCE CATEGORY:
PETROLEUM, OIL, AND LUBRICANT (POL) MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>mil, single-layer or composite, flexible membrane material that is anchored to the dike.</p> <p>Verify that, if contaminated soils are not stored on a hardtop surface, the facility collects one soil sample from beneath the synthetic membrane liner immediately after disposal and has it analyzed for the same constituents for which the stored soils were analyzed.</p> <p>Verify that contaminated soils are not stored on-site for more than 30 days.</p> <p>(NOTE: The Department may grant 30-day extensions if circumstances prohibit disposal. Trucking distance to a landfill is not an extendable circumstance unless the Department is notified of actions being taken by the facility to arrange for alternative disposal, such as land farming, and the Department is satisfied that a good faith effort is being made.)</p> <p>Verify that, if contaminated soils are stored on-site for more than 30 days, the facility inspects the flexible membrane material cover every 30 days and replaces it, if necessary, with a new 10-mil flexible membrane material cover.</p> <p>(NOTE: The Department may allow the facility to store contaminated soils off-site if the landowner signs an affidavit giving approval for the storage. Off-site storage must comply with the synthetic liner and cover requirements and the sampling requirements. Contaminated soils may not be stored off-site for more than 30 days. The Department may grant off-site storage extensions for circumstances that prohibit disposal if the landowner also approves of the extension.)</p> <p>(NOTE: The Department may allow other types of storage areas if they meet or exceed the requirements of this chapter.)</p>

SECTION 9

SOLID WASTE MANAGEMENT

South Dakota Supplement, February 2010

This section covers the state requirements for Solid Waste Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Definitions

- *Active Flu Area* - the portion of a disposal site that is currently in use for the disposal of wastes (SDAR 74:27:07:01).
- *Active Life* - the period of operation of a disposal site beginning with the initial receipt of solid waste and ending upon completion of closure activities (SDAR 74:27:07:01).
- *Ambient* - the constituents or parameters and the concentration or measurements which describe water quality prior to a subsurface discharge (SDAR 74:27:07:01).
- *Applicant* - a person submitting an application to the secretary for a permit for a solid waste facility (SDAR 74:27:07:01).
- *Aquifer* - a geologic formation, group of geologic formations, or part of a geologic formation that contains sufficient saturated permeable material to yield economical quantities of water to wells and springs (SDAR 74:27:07:01).
- *Ash* - residue from the combustion of solid waste or any solid or liquid material (SDAR 74:27:07:01).
- *Assessment Monitoring* - groundwater monitoring resulting from the detection of a statistically significant increase above the ambient groundwater quality (SDAR 74:27:07:01).
- *Balefill* - a facility that disposes of solid waste that has been compressed and bound (SDAR 74:27:07:01).
- *Baling* - a volume reduction technique that compresses solid waste into bales for final disposal (SDAR 74:27:07:01).
- *Bulky Items* - large items such as white goods or furniture (SDAR 74:27:07:01).
- *Biologicals* - preparations made from living organisms and their products, including vaccines and cultures intended for use in diagnosis of, immunization against, and treatment for disease of animals and humans (SDAR 74:35:01:02).
- *Blood Product* - any product derived from human blood, including but not limited to blood plasma, platelets, red or white blood corpuscles, and other derived licensed products, such as interferon, etc. (SDAR 74:35:01:02).
- *Body Fluids* - liquid emanating or derived from humans limited to blood; cerebrospinal, synovial, pleural, peritoneal and pericardial fluids; amniotic fluids; semen; and vaginal secretions (SDAR 74:35:01:02).
- *Collection* - the gathering of solid waste from public and private places for recycling or disposal (SDAR 74:27:07:01).

- *Commercial Solid Waste* - solid waste generated by stores, offices, restaurants, warehouses, printing shops, service stations, and other nonmanufacturing, nonhousehold sources (SDAR 74:27:07:01).
- *Composting* - the controlled biological decomposition of the organic portion of solid waste in a manner resulting in an innocuous final product that may be applied to land for the purposes of soil conditioning (SDAR 74:27:07:01).
- *Construction and Demolition Debris* - waste building materials resulting from construction, remodeling, repair, and demolition operations on pavements, houses, commercial buildings, and other structures, excluding regulated asbestos-containing waste material or ash (SDAR 74:27:07:01).
- *Contract Incineration Facility* - a facility incinerating solid wastes for financial (SDAR 74:27:07:01).
- *Cover Material* - soil or other suitable material that is approved by the secretary through the permitting process and that is used to cover compacted solid wastes (SDAR 74:27:07:01).
- *Decontamination* - the process of reducing or eliminating the presence of harmful substances, such as infectious agents, so as to reduce the likelihood of disease transmission from those substances (SDAR 74:35:01:02).
- *Design Capacity* - the amount of waste that an incinerator can thoroughly combust in a specified time period (SDAR 74:35:01:02).
- *Destination Facility* - the disposal facility, the incineration facility, or the facility that both treats and destroys a regulated medical waste intended to be shipped to it (SDAR 74:35:01:02).
- *Destroyed Regulated Medical Waste* - regulated medical waste that has been ruined, torn apart, or mutilated through processes such as thermal treatment, melting, shredding, grinding, tearing or breaking, so that it is no longer generally recognizable as medical waste, excluding compacted medical waste (SDAR 74:35:01:02).
- *Destruction Facility* - a facility that destroys regulated medical waste by ruining it, mutilating it, or tearing it apart (SDAR 74:35:01:02).
- *Detection Monitoring* - groundwater monitoring at a solid waste disposal facility that has not detected a statistically significant increase above ambient groundwater quality (SDAR 74:27:07:01).
- *Disease Vectors* - organisms that are capable of carrying and transmitting disease to humans or other mammals (SDAR 74:27:07:01).
- *Disposal* - the discharge, deposit, injection, dumping, spilling, leaking, or placing of solid waste into or on the land so that the solid waste or any of its constituents may enter the environment, be discharged to any waters, including groundwater, or be emitted into the air (SDAR 74:27:07:01).
- *Dioxin/furan* - total tetra- through octa-chlorinated dibenzol-p-dioxins and dibenzofurans (SDAR 74:35:01:02).
- *Emergency* - a condition that the secretary finds deleterious to the public health, safety, and welfare and that requires immediate action (SDAR 74:27:07:01).
- *Existing Facility* - any facility receiving solid waste before 9 October 1991 that is in compliance with past design and operational regulations and practices (SDAR 74:27:07:01).
- *Existing Regulated Medical Waste Incinerator* - a regulated medical waste incinerator in existence prior to 1 January, 1991, or one which has been issued a construction or operating permit required by 74:26:01:08 or 74:26:01:26 prior to that date (SDAR 74:35:01:02).

- *Facility* - 1. definition 2. any property, real or personal, including processing equipment, manufacturing equipment, fuel-burning equipment, construction equipment, and incinerators, or any other equipment used for treating, destroying, storing, or disposing of regulated medical waste (SDAR 74:35:01:02).
- *Fault* - a fracture or fracture zone along which there has been displacement of the sides relative to one another (SDAR 74:27:07:01).
- *Floodplain* - the lowland and relatively flat areas adjoining inland waters which may be inundated by a baseflood, which is a flood that has one percent or greater chance of occurring in any year or that has a chance of occurring once in 100 yr on the average over a long period (SDAR 74:27:07:01).
- *Garbage* - solid and semisolid putrescible animal and vegetable wastes resulting from the handling, preparing, cooking, storing, serving, and consuming of food or of material intended for use as food, and all offal, excluding useful industrial by-products, from all public and private establishments and from all residences (SDAR 74:27:07:01).
- *General Permit* - a written authorization issued by the board allowing a specific category of solid waste storage, collection, processing, or disposal (SDAR 74:27:07:01).
- *Generator* - any person, by site, whose act or process produces regulated medical waste or whose act first causes a regulated medical waste to become subject to regulation (SDAR 74:35:01:02).
- *Groundwater* - water below the land surface that is in the zone of saturation (SDAR 74:27:07:01).
- *Household Waste* - solid waste derived from households, including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day use recreation areas, but not waste from commercial activities, that is generated, stored, or present in a household (SDAR 74:27:07:01).
- *Incinerator* - (SDAR 74:27:07:01):
 1. a furnace used to burn solid waste to reduce the volume of the waste by removing its combustible waste
 2. an enclosed thermal device that uses controlled flame combustion to reduce waste to a residue.
- *Industrial Waste* - solid waste generated by manufacturing or industrial processes (SDAR 74:27:07:01).
- *Infectious Agent* - an organism, such as a virus or a bacteria, that is capable of being transmitted and causing disease (SDAR 74:35:01:02).
- *Laboratory* - a research, analytical, or clinical facility that performs health-care-related analysis or service, including medical, pathological, pharmaceutical, and other research, commercial, or industrial laboratories (SDAR 74:35:01:02).
- *Land Application System* - an operation that places solid wastes onto or incorporates solid wastes into the soil surface (SDAR 74:27:07:01).
- *Lateral Expansion* - a horizontal expansion of the waste boundaries of an existing unit (SDAR 74:27:07:01).
- *Leachate Collection System* - any combination of landfill base slopes, liners, permeable zones, pipes, sumps, pumps, or retention structures that are designed, constructed, operated, and maintained to monitor, collect, and remove leachate generated in a solid waste landfill (SDAR 74:27:07:01).
- *Liner* - a continuous layer of natural or synthetic materials beneath and on the sides of a surface impoundment, landfill, or landfill unit, which prohibits the downward or lateral escape of wastes, waste constituents, or leachate (SDAR 74:27:07:01).

- *Liquid Waste* - any waste which produces measurable liquids when the Paint Filter Liquids Test, Method 9095, EPA publication Number SW-846, 1986, is used (U.S. Government Printing Office; 1984 0-461-218/549) (SDAR 74:27:07:01).
- *Lower Explosive Limit* - the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25 ° Celsius and atmospheric pressure (SDAR 74:27:07:01).
- *Medical Waste* - any solid waste that is generated in the diagnosis, treatment, or immunization of humans or animals, in research pertaining to diseases of humans or animals, or in the production or testing of biologicals (SDAR 74:35:01:02).
- *Medical Waste Incinerator* - an incinerator designed and operated to burn regulated medical waste (SDAR 74:35:01:02).
- *Monofill* - a landfill unit into which only one type of waste is placed (SDAR 74:27:07:01).
- *Municipal Solid Waste Landfill Facility (MSWLF)* - a facility that receives any household waste for land disposal (SDAR 74:27:07:01).
- *New Facility* - a facility constructed after 8 October 1991 (SDAR 74:27:07:01).
- *New Regulated Medical Waste Incinerator* - a regulated medical waste incinerator which does not meet the definition of existing regulated medical waste incinerator or one which undergoes reconstruction or modification after December 31, 1990 (SDAR 74:35:01:02).
- *Open Burning* - the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the ambient air without passage through a stack, a duct, or chimney (SDAR 74:27:07:01).
- *Operator* - the person responsible for the overall operation of a facility or part of a facility (SDAR 74:27:07:01).
- *Owner* - the person responsible for the overall operation of a facility or part of a facility (SDAR 74:27:07:01).
- *Passenger Tire Equivalent* - the weight of waste tires or parts of waste tires equivalent to the average weight of one waste passenger tire. The average weight of one waste passenger tire is equal to 20 pounds (SDAR 74:27:22:01) [Added February 1999].
- *Permit* - a written authorization issued by the board or secretary allowing the construction or operation, or both, of a solid waste facility (SDAR 74:27:07:01).
- *Phase I Application* - a permit application for preliminary review of new Type I and IIA facilities which contains information required by the secretary (SDAR 74:27:07:01).
- *Processing* - an operation designed to transfer, shred, grind, bale, compact, salvage, separate, incinerate, reclaim, or provide other treatment of solid waste (SDAR 74:27:07:01).
- *Regulated Medical Waste* - solid waste generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining to diseases of humans or animals, or in the production or testing of biologicals, as listed below (SDAR 74:35:01:06 and 74:35:01:07) [Citation Revised February 2007]:
 1. cultures and stocks of infectious agents and associated biologicals, including the following:
 - a. cultures from medical and pathological laboratories
 - b. cultures and stocks of infectious agents from research and industrial laboratories
 - c. wastes from the production of biologicals
 - d. discarded live and attenuated vaccines
 - e. culture dishes and devices used to transfer, inoculate, or mix cultures

2. human pathological waste including:
 - a. tissues, organs, and body parts and body fluids that are removed during surgery, autopsy, or other medical procedures except those extracted teeth that are returned to the patient
 - b. specimens of body fluids and their containers
3. human blood and blood products, as follows:
 - a. liquid waste human blood
 - b. products of blood
 - c. items saturated or dripping with human blood
 - d. items that were saturated or dripping with human blood that are now cake with dried human blood
 - e. serum, plasma, and other blood components, and their containers, which were used or intended for use in either patient care, testing, and laboratory analysis or the development of pharmaceuticals
 - f. intravenous blood and blood product bags
4. sharps that have been used in animal or human patient care or treatment or in medical, research, or industrial laboratories, including the following:
 - a. hypodermic needles
 - b. syringes with the attached needle or containing body fluids
 - c. pasteur pipettes
 - d. scalpel blades
 - e. blood vials
 - f. needles with attached tubing
 - g. culture dishes, regardless of the presence of infectious agents
 - h. other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides and cover slips
5. animal waste i.e., contaminated animal carcasses, body parts, and bedding of animals that were known to have been exposed to infectious agents during research (including research in veterinary hospitals), production of biologicals, testing pharmaceuticals
6. isolation wastes i.e., biological waste and discarded materials contaminated with blood, excretion, exudates, or secretions for humans who are isolated to protect others from certain highly communicable diseases as identified by the health care facility or isolated from animals known to be infected with highly communicable diseases
7. the following unused, discarded sharps:
 - a. hypodermic needles
 - b. suture needles
 - c. syringes with the attached needle
 - d. scalpel blades.

(NOTE: The following are not included in the definition of medical waste:

1. hazardous waste
2. household waste or household-type waste generated in a facility
3. ash from incineration of regulated medical waste
4. residues from treatment and destruction processes once the waste has been both treated and destroyed
5. human corpses, remains, and anatomical parts that are intended for interment or cremation
6. etiologic agents being transported interstate
7. samples of regulated medical waste transported offsite for enforcement purposes by the USEPA or the state.)

- *Relevant Point of Compliance* - a point or points at which contamination triggers the corrective action requirements of chapter 74:27:21. This point is a vertical surface located no more than 150 meters from the landfill unit and on land owned by the owner or operator. This vertical surface extends down to the uppermost occurrence of groundwater as defined by 74:03:15:02 (SDAR 74:27:07:01).
- *Rubble* - stone, brick, concrete, or similar inorganic material, excluding ash, waste tires, trees, yard waste, and regulated asbestos-containing waste materials (SDAR 74:27:07:01).
- *Runoff* - any rainwater, snow-melt, or other precipitation, leachate, or other liquid that drains over land from any part of a facility (SDAR 74:27:07:01).

- *Runon* - any rainwater, snow-melt, or other precipitation, leachate, or other liquid that drains over land onto any part of a facility (SDAR 74:27:07:01).
- *Salvaging* - the controlled reclamation of solid waste at a facility (SDAR 74:27:07:01).
- *Scavenging* - the uncontrolled and unauthorized removal of solid waste from a facility (SDAR 74:27:07:01).
- *Seismic Impact Zone* - an area that has a 10 percent or greater probability, within a 250-year period, that the maximum expected horizontal acceleration in the lithified earth material will equal or exceed 10 percent of the acceleration of gravity (0.1g) (SDAR 74:27:07:01).
- *Shredding* - the process of reducing the particle size of solid wastes through the use of a grinding, shredding, milling, or rasping machine (SDAR 74:27:07:01).
- *Site* - buildings or facilities that are physically contiguous or adjacent to one another and that are used in the generation, storage, or disposal of regulated medical waste (SDAR 74:35:01:02).
- *Sludge* - the accumulated semisolid mixture of solid wastes and water, oils, or other liquids (SDAR 74:27:07:01).
- *Small-town Exemption* - an exemption from the liner requirements of 74:27:12:17 and the leachate collection and removal system requirements of 74:27:12:18 for a MSWLF that complies with 74:27:12:25 (SDAR 74:27:07:01).
- *Special Wastes* - those wastes that require special handling as described in 74:27:13:17 (SDAR 74:27:07:01).
- *Statistically Significant Increase* - one of the statistical methods to evaluate groundwater monitoring data allowed by 40 C.F.R. Part 258.53(g) - (i), inclusive, as published on 56 Fed. Reg. 51,023 and 51,024 (October 9, 1991) (SDAR 74:27:07:01).
- *Storage* - 1. the interim containment of solid waste after generation and before recycling or disposal (SDAR 74:27:07:01), 2. the temporary holding of regulated medical waste at a designated accumulation area before treatment, disposal, or transport to another location.
- *Surface Impoundment* - a natural topographic depression, artificial excavation, or dike arrangement that is used primarily for containment, treatment, or disposal of liquid waste and is constructed above, below, or partially in the ground (SDAR 74:27:07:01).
- *Surface Water* - lakes, ponds, streams, rivers, wetlands, and any other body or accumulation of water on the land surface that is considered to be waters of the state, but not waste treatment systems, including treatment ponds, lagoons, leachate collection ponds, or stormwater retention ponds designed to meet the requirements of the CWA other than cooling ponds as defined in 40 C.F.R. 423.11(m) (SDAR 74:27:07:01).
- *Transfer Facility* - a transportation-related facility, including loading docks, parking areas, storage areas, and other similar areas, where shipments of regulated medical waste are held during the course of transportation; a location at which regulated medical waste is transferred directly between two vehicle (SDAR 74:35:01:02).
- *Transfer Station* - a portable or fixed facility where solid waste from collection vehicles is consolidated and temporarily stored for subsequent transport to a facility (SDAR 74:27:07:01).
- *Transporter* - a person or transfer facility engaged in the offsite transportation of regulated medical waste that has been treated to substantially reduce or eliminate its potential for causing disease (SDAR 74:35:01:02).
- *Treatment* - 1. a process designed to alter the physical, chemical, or biological character of solid waste so as to neutralize or render the waste suitable for transport, recovery, storage, or disposal in a safe and environmentally

sound manner (SDAR 74:27:07:01) 2. when used in the context of medical waste management, any method, technique, or process designed to change the biological character or composition of a regulated medical waste to reduce or eliminate its potential for causing disease; when used in the context of humans or animals, either the provision of medical services or the preparation of human or animal remains for interment or cremation (SDAR 74:35:01:02).

- *Treatment Cycle* - the time required for a method, technique, or process designed for the treatment of regulated medical waste to render regulated medical waste noninfectious or reduce or eliminate its potential for causing disease (SDAR 74:35:01:02).
- *Trees* - trunks, limbs, stumps, or branches from trees or shrubs (SDAR 74:27:07:01).
- *Type I Facility* - a facility that receives more than 150,00 tons of solid waste each year (SDAR 74:27:07:01).
- *Type IIA Facility* - a facility that receives between 25,00 tons and 150,000 tons of solid waste each year (SDAR 74:27:07:01).
- *Type III Facility* - a facility that receives between 500 tons and 4,999 tons of solid waste each year (SDAR 74:27:07:01).
- *Type IV Facility* - a facility that receives less than 500 tons of solid waste each year (SDAR 74:27:07:01).
- *Untreated Regulated Medical Waste* - regulated medical waste that has not been treated to substantially reduce or eliminate its potential for causing disease (SDAR 74:35:01:02).
- *Unstable Area* - a location that is susceptible to events or forces induced by nature or by humans that are capable of impairing the integrity of some or all of a MSWLF's structural components that are responsible for preventing releases from the MSWLF (SDAR 74:27:07:01).
- *Waste Category* - the designation of regulated medical waste as either treated or untreated (SDAR 74:27:07:01).
- *Waste Tire Generator* - a person who produces waste tires in the course of retreading tires or buying, selling, or trading vehicles or tires (SDAR 74:27:22) [Added February 1999].
- *Waste Tire Hauler* - a person who transports, at any one time, more than 20 waste passenger tires or passenger tire equivalent weight of other waste tires or transports more than 100 passenger tire equivalent per 12 month period (SDAR 74:27:22) [Added February 1999].
- *Waste Tires* - tires that are no longer suitable for their original intended purpose because of wear, damage, or defect; parts of tires (SDAR 74:27:07:01).
- *Wetlands* - those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include swamps, marshes, bogs, and similar areas (SDAR 74:27:07:01).
- *White Goods* - discarded refrigerators, ranges, washers, water heaters, and other similar domestic and commercial appliances (SDAR 74:27:07:01).
- *Working Face* - the active surface of a landfill upon which solid wastes are deposited during the landfill operation (SDAR 74:27:07:01).

**SOLID WASTE MANAGEMENT
GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS**

REFER TO CHECKLIST ITEMS:

Missing Checklist Items	SO.2.1.SD.
State-Specific Regulations	
General	SO.5.1.SD. and 5.2.SD.
Permits/ Notifications/ Exemptions	SO.6.1.SD. through SO.6.3.SD.
Operations	SO.8.1.SD.
Storage/Collection of Solid Waste	SO.10.1.SD.
Recycling	SO.25.1.SD. through SO.25.8.SD.
Municipal Solid Waste Landfills	
Location Restrictions	SO.55.1.SD.
Design Criteria	SO.60.1.SD. through SO.60.16.SD.
Operating Criteria	SO.65.1.SD. through SO.65.9.SD.
Emissions	SO.67.1.SD.
Groundwater Monitoring Criteria	SO.70.1.SD. through SO.70.6.SD.
Closure Criteria	SO.75.1.SD. through SO.75.2.SD.
Post-closure Care Requirements	SO.80.1.SD. through SO.80.2.SD.
Documentation	SO.85.1.SD. through SO.85.4.SD.
Medical Waste	
Containers/Labeling/Storage Areas	SO.110.1.SD. through SO.110.5.SD.
Treatment/Disposal	SO.120.1.SD. through SO.120.8.SD.
Documentation	SO.125.1.SD.
Landfills	SO.135.1.SD. through SO.35.30.SD.
Inert Waste Landfills	SO.140.1.SD. through SO.140.11.SD.
Incinerators	SO.145.1.SD. through SO.145.8.SD.
Waste Tire Management	SO.160.1.SD. through SO.160.5.SD.

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
SO.2 MISSING CHECKLIST ITEMS SO.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
STATE-SPECIFIC REGULATIONS <p>SO.5. General</p> <p>SO.5.1.SD. Facilities must comply with all applicable laws and ordinances (SDAR 74:27:08:04).</p> <p>SO.5.2.SD. The open burning of municipal solid waste is prohibited except under specific conditions (SDAR 74:27:13:11 and 74:36:15:01 and 74:36:15:03).</p>	<p>Verify that facilities comply with all applicable state, Federal, and local laws and ordinances.</p> <p>(NOTE: A municipality or county governmental agency may not burn municipal solid waste unless exempted by the small town exemption in accordance with 74:27:12:25.)</p> <p>Verify that opening burning of municipal solid waste is prohibited unless the burning takes place in rural areas where no organized collection system or disposal facilities are available.</p> <p>Verify that permitted burning of municipal solid waste generated on the premises is conducted in a container if the following conditions are met:</p> <ul style="list-style-type: none"> - burning is conducted on the property where the waste is generated - burning complies with SDCL 34A-6-1.4 - burning of pesticide containers complies with applicable provisions (SDAR 74:36:15:03).

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
STATE-SPECIFIC REGULATIONS <p>SO.6. Permits/Notifications/ Exemptions</p> <p>SO.6.1.SD. Solid waste facilities must not be constructed or operated without a permit (SDAR 74:27:08:01, 74:27:08:02 and 74:27:08:21).</p>	<p>(NOTE: Facilities are divided into the following categories:</p> <ul style="list-style-type: none"> - Type I facilities are those facilities that receive more than 150,000 tons of solid waste each year - Type IIA facilities are those facilities that receive between 25,000 and 150,000 tons of solid waste each year - Type IIB facilities are those facilities that receive between 5000 tons and 24,999 tons of solid waste each year - Type III facilities are those facilities that receive between 500 and 4999 of solid waste each year - Type IV facilities are those facilities that receive less than 500 tons of solid waste each year.) <p>Verify that solid waste facilities are not contracted or operated before a permit is applied for and obtained.</p> <p>(NOTE: Permits are required before construction begins.)</p> <p>Verify that permission is granted by the Board before a permit is transferred.</p>
<p>SO.6.2.SD. General permits may be issued for a specific category of solid waste storage, processing, transportation, or disposal (SDAR 74:27:10:01, 74:27:10:02, 74:27:07:03 and 74:27:10:06).</p>	<p>Verify that any category of solid waste storage, processing, transportation, or disposal operated under a general permit meets all applicable solid waste management requirements and any requirements imposed by the Board.</p> <p>(NOTE: The requirements for general permits are not applicable to existing facilities.)</p> <p>(NOTE: The following are the categories of solid waste handling that may be issued a general permit:</p> <ul style="list-style-type: none"> - land application of petroleum contaminate soils - land application of whey or whey permeate from cheese manufacturing facilities - rubble disposal - construction or demolition debris disposal - sludge disposal - transfer stations accepting more than 500 tons of solid waste a year but less than 25,000 tons of solid waste a year - waste tire handling facilities - asbestos monofills - other categories that meet the above criteria.)

COMPLIANCE CATEGORY:
SOLID WASTE MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.6.3.SD. Facility personnel must not excavate landfill units without permission from the secretary (SDAR 74:27:13:23)</p>	<p>(NOTE: The Board may require facilities authorized under a general permit to apply for and obtain an individual solid waste permit based on specific findings by the Board indicating the necessity for the individual permit.)</p> <p>Verify that facility personnel do not excavate, disrupt, or remove any deposited material from an active or discontinued facility unit without first notifying the Secretary in writing and obtaining approval.</p> <p>Verify that the notification includes an operational plan stating:</p> <ul style="list-style-type: none"> - the area involved - the reasons for excavation - the lines and grade-defining limits of the excavation - the estimated number of cubic yards of material to be excavated - the solid waste facility where the excavated material will be disposed of - the estimated time required for the excavation procedures - reclamation plans. <p>Verify that the excavator takes measures during operation to control:</p> <ul style="list-style-type: none"> - erosion - sedimentation - dust - odors - fires - rodents - insects - blowing litter.

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
STATE-SPECIFIC REGULATIONS <p>SO.8. Operations</p> <p>SO.8.1.SD. Facilities generating solid waste must determine whether that waste is hazardous (SDAR 74:27:13:18).</p>	Verify that facilities generating commercial or industrial solid waste determine whether the waste is hazardous.

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.10.</p> <p>STORAGE/COLLECTION OF SOLID WASTE</p> <p>SO.10.1.SD. The collection, storage, transportation, or processing of solid wastes must meet specific requirements (SDAR 74:27:17:01).</p>	<p>Verify that solid waste is not collected, transported, stored, or processed in a manner that poses a direct or deleterious threat to public health or to the quality of the environment.</p> <p>Verify that, at a minimum, the management of solid wastes does not:</p> <ul style="list-style-type: none"> - contribute to the proliferation of any disease vectors - cause or contribute to surface water or groundwater pollution - cause or contribute to air pollution - cause or contribute to littering, cause or contribute to pollution of lands, reduce aesthetic quality, or be a detriment in any other way to public health or the environment.

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
SO.25. RECYCLING SO.25.1.SD. State agencies must have and comply with a written recycling plan for each waste identified for recycling (SDAR 10:06:01:02 and 10:06:01:13).	<p>Very that each state agency has filed a written plan with the Bureau of Administration 60 days before the date specified for the elimination of the waste.</p> <p>Verify that the plan identifies the specific methods to be implemented to eliminate the specified waste from the agency's landfill waste and the dates on which the changes will be or have been made.</p> <p>Verify that the agency complies with its written recycling plan.</p> <p>(NOTE: Agencies that use a vendor for recycling or disposal of waste material may either sell the waste material to the vendor, pay the vendor to recycle or dispose of the waste material, or give the waste material to the vendor at no charge.)</p> <p>Verify that any vendor certifies that the waste material does not go to a South Dakota landfill.</p>
SO.25.2.SD. State agencies in specific cities must recycle office and computer paper in compliance with the statewide program (SDAR 10:06:01:04).	<p>(NOTE: State agencies in Aberdeen, Brookings, Custer, Hot Springs, Huron, Madison, Mitchell, Pierre, Rapid City, Sioux Falls, Spearfish, Springfield, Sturgis, Vermillion, Watertown, and Yankton must recycle wastepaper through the statewide paper recycling program.).</p> <p>(NOTE: The statewide recycling program consists of interagency collection, pick-up, storage, and transportation to a recycling center. Pick-up, storage, and transportation to a recycling center may be provided by a private vendor or agency.)</p> <p>Verify that each state agency has a desk side recycling box for each employee and a set of sorting bags and rack for each 15 employees.</p> <p>Verify that individual employees collect, empty, and sort waste office and computer paper from their personal boxes into the general collection bags as necessary.</p> <p>Verify that the agency or a private vendor collects the bags containing wastepaper as necessary and store them for transportation to a paper recycling center.</p>
SO.25.3.SD. State agencies in specific cities must recycle office and computer paper	<p>(NOTE: These requirements apply to state agencies in cities other than Aberdeen, Brookings, Custer, Hot Springs, Huron, Madison, Mitchell, Pierre, Rapid City, Sioux Falls, Spearfish, Springfield, Sturgis, Vermillion, Watertown, and</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
program (SDAR 10:06:01:05).	<p>Yankton.)</p> <p>Verify that state employees recycle waste office and computer paper generated by their agency.</p> <p>Verify that the state agency provides each such employee with a desk side recycling box.</p> <p>Verify that each office has a general wastepaper collection station consisting of sorting boxes from Central Supply in Pierre.</p> <p>Verify that agency offices store collected paper on site and deliver the collected paper to one of the cities listed in SO.25.3.SD by means of an employee of that agency who is traveling to one of the cities on other business.</p> <p>(NOTE: An agency with an existing contract to recycle wastepaper in the manner described in SDCL 5-23-39 complies with this section.)</p>
SO.25.4.SD. State agencies must not dispose of yard waste as landfill waste (SDAR 10:06:01:06).	<p>Verify that the state agency eliminates yard wastes from its landfill wastes by one of the following methods:</p> <ul style="list-style-type: none"> - use of a mulching mower - grinding or shredding of waste for use as plant bedding - taking yard waste to a composting vendor or composting site.
SO.25.5.SD. State agencies must not dispose of waste motor oil, lead acid batteries, and tires as landfill waste (SDAR 10:06:01:07, 10:06:01:08, and 10:06:01:09).	<p>Verify that the state agency eliminates lead acid batteries from its landfill wastes by returning the battery to one of the following:</p> <ul style="list-style-type: none"> - a retail vendor upon the purchase of a new battery - a local collector of used batteries for recycling - a local Department of Transportation shop that collects lead acid batteries for recycling. <p>Verify that the state agency eliminates waste motor oil from its landfill wastes by one of the following methods:</p> <ul style="list-style-type: none"> - through a local waste motor oil recycling or disposal vendor - through a local Department of Transportation shop that recycles or disposes of waste motor oil. <p>(NOTE: The Department of Transportation shops that recycle or dispose of waste motor oil are located in Aberdeen, Brookings, Watertown, Huron, Pierre, Mobridge, Murdo, Winner, Mitchell, Sioux Falls, Yankton, Rapid City, Belle Fourche, and Custer.)</p>

COMPLIANCE CATEGORY:
SOLID WASTE MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>Verify that the state agency eliminates waste tires from its landfill waste by one of the following methods:</p> <ul style="list-style-type: none"> - returning to a retail vendor upon the purchase of new tires - eliminating through a tire recycling or disposal vendor - eliminating through a local Department of Transportation shop that recycles or disposes of waste tires.
SO.25.6.SD. State agencies must not dispose of white good appliances as landfill waste (SDAR 10:06:01:10).	<p>Verify that the state agency eliminates white good appliances from its landfill wastes by one of the following methods:</p> <ul style="list-style-type: none"> - returning to the vendor upon the purchase of new white good appliances - through a local scrap metal or white goods appliance recycling or disposal vendor.
SO.25.7.SD. State agencies must not dispose of printed-paper, corrugated paper, and other cardboard as landfill waste (SDAR 10:06:01:11).	<p>Verify that the state agency eliminates printed-paper, corrugated paper, and other cardboard from its landfill wastes through a local paper and cardboard recycling or disposal vendor.</p>
SO.25.8.SD. State agencies must not dispose of glass, plastic, aluminum, and steel as landfill waste (SDAR 10:06:01:12) [Citation Revised February 2007].	<p>Verify that the state agency eliminates glass, plastic, aluminum, and steel from its landfill wastes by one of the following methods:</p> <ul style="list-style-type: none"> - returning it to the vendor upon the purchase of new products made of glass, plastic, aluminum, and steel - through a glass, plastic, aluminum, and steel recycling or disposal vendor.

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
MUNICIPAL SOLID WASTE LANDFILLS <p>SO.55. Location Restrictions</p> <p>SO.55.1.SD. MSWLFs must meet specific location restrictions (SDAR 74:27:11:02 through 74:27:11:08:03).</p>	<p>Verify that MSWLFs are not located in the following areas:</p> <ul style="list-style-type: none"> - a location that causes significant adverse effect to wildlife, recreation, aesthetic value of an area, or state and federal threatened or endangered species - within the boundaries of a 100-yr floodplain - facilities containing putrescible wastes capable of attracting birds may not be located within 5,000 ft of an airport runway end used only by piston-type aircraft, and within 10,000 ft of an airport runway end used by turbojet aircraft - within 1,000 ft of an occupied dwelling, school, hospital, interstate or primary highway right-of-way, or public park or recreation area - areas that would pose a potential safety hazard to the public - facilities containing putrescible waste or other facilities disposing of materials that may pollute surface water may not be located within 1,000 ft of streams, creeks, lakes, reservoirs, or other bodies of water classified for fish life propagation - wetlands - seismic impact zones - unstable areas - within 200 ft of a fault which has had displacement in Holocene time. <p>(NOTE: The FAA must be informed in writing if a MSWLF is located within 5 mi of an airport.)</p> <p>NOTE: The location restrictions apply to new MSWLFs and lateral expansions of existing facilities (SDAR 74:27:11:01).)</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
MUNICIPAL SOLID WASTE LANDFILLS <p>SO.60. Design Criteria</p> <p>SO.60.1.SD. MSWLFs must be designed to protect human health and prevent degradation of the environment (SDAR 74:27:12:02).</p>	Verify that MSWLFs are designed to protect human health and prevent degradation of the environment, including the following: <ul style="list-style-type: none"> - ambient groundwater quality - surface water quality - air quality. <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>
<p>SO.60.2.SD. MSWLFs must have an all-weather fill area (SDAR 74:27:12:07).</p>	Verify that MSWLF open to the public have an all-weather fill area for use during inclement weather. <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>
<p>SO.60.3.SD. MSWLFs must be accessible by an all-weather access road (SDAR 74:27:12:06).</p>	Verify that MSWLFs are accessible by an all-weather access road and they have all-weather on-site roads suitable for travel by loaded vehicles. <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>
<p>SO.60.4.SD. MSWLFs must comply with specific posting standards (SDAR 74:27:12:08).</p>	Verify that MSWLFs have a sign posted at the entrance stating the following: <ul style="list-style-type: none"> - name of the facility - name and phone number of the person responsible for the site - days and hours of operation - unloading directions - fees - prohibited wastes - other information as needed. <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.60.5.SD. MSWLFs must control public access (SDAR 74:27:12:08).</p>	<p>Verify that MSWLFs control public access through the following:</p> <ul style="list-style-type: none"> - use of fences - gates with locks - similar controls. <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>
<p>SO.60.6.SD. MSWLFs must have litter control devices (SDAR 74:27:12:10).</p>	<p>Verify that MSWLFs have litter control devices at the face of the unloading area and around the perimeter of the site.</p> <p>Verify that the litter control devices are of sufficient size to control blowing litter.</p> <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>
<p>SO.60.7.SD. MSWLFs must have specific fire control measures in place (SDAR 74:27:12:11).</p>	<p>Verify that MSWLFs have a fire land at least 25 ft wide around the active disposal area and within the perimeter fence.</p> <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>
<p>SO.60.8.SD. MSWLFs must have a buffer zone (SDAR 74:27:12:12).</p>	<p>Verify that MSWLFs have a buffer zone of at least 100 ft, including the fire lane, within the perimeter fence.</p> <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>
<p>SO.60.9.SD. MSWLFs that have truck washing facilities must meet specific requirements (SDAR 74:27:13:24).</p>	<p>Verify that MSWLFs that have truck-washing facilities are equipped with a hard surface.</p> <p>(NOTE: Wash water is considered leachate and is disposed of according to SO.60.14.)</p> <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
SO.60.10.SD. MSWLFs with waste storage areas must meet specific requirements (SDAR 74:27:12:14).	<p>Verify that MSWLFs with waste storage areas meet the following design requirements:</p> <ul style="list-style-type: none"> - able to store the maximum amount of waste in storage at any one time - b limited to authorized personnel - protect waste from the elements - ventilated to the outdoors. <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>
SO.60.11.SD. Type I and II MSWLFs must have specific personnel facilities (SDAR 74:27:12:14).	<p>(NOTE: See Definitions for identification of Type I and II MSWLFs.)</p> <p>Verify that Type I and II MSWLFs include employee facilities that:</p> <ul style="list-style-type: none"> - provide shelter - sanitary facilities - potable drinking water - safety equipment - emergency communication equipment. <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>
SO.60.12.SD. MSWLFs must have surface water controls (SDAR 74:27:12:16).	<p>Verify that MSWLFs have surface water drainage and control systems that divert normal surface water flow and storm water runoff around or away from areas where waste is present and from operational areas.</p> <p>Verify that surface water drainage and control systems are designed to minimize mixing of storm water with leachate and to handle the peak flow from a 25-yr, 24-h storm.</p> <p>Verify that storm water and other surface drainage that comes into contact with solid waste or mixes with leachate is considered leachate and handled according to SO.60.14.</p> <p>Verify that disposal methods for accumulated sediment in the surface water control structures have approval by the Secretary.</p> <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>
SO.60.13.SD. MSWLFs must have liner systems	Verify that MSWLFs incorporate a composite liner system into the design of the MSWLFs unless the facility meets the small-town exemption criteria of

COMPLIANCE CATEGORY:
SOLID WASTE MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
(SDAR 74.27.12.17).	<p>SO.85.1.SD.</p> <p>Verify that liner systems are constructed of materials that have the strength, thickness, and chemical properties needed to prevent failure due to pressure gradients, physical contact with the waste or leachate to which they are exposed, climatic conditions, stress of installation, and stress of daily operation.</p> <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>
SO.60.14.SD. MSWLFs must have leachate collection and removal systems (SDAR 74:27:12:18).	<p>Verify that MSWLFs incorporate a leachate collection and removal system into the design of the facility unless exempted from these requirements by the small-town exemption provisions of SO.85.1.</p> <p>Verify that leachate collection and removal systems meet the following requirements:</p> <ul style="list-style-type: none"> - be constructed of materials chemically resistant to the waste to be disposed of in the landfill and to the leachate expected to be generated. - of sufficient strength and thickness to prevent collapse under pressures exerted by overlying wastes and cover materials and by equipment used at the landfill - designed and operated to prevent clogging through the active life of the facility and the postclosure period - designed to move leachate within the drainage system to a central collection point for treatment or disposal. <p>Verify that the leachate collection and removal system is of the appropriate size and spacing with sumps and pumps or other means for efficiently remove leachate.</p> <p>Verify that sufficient granular material or synthetic fabric filter is placed over the leachate collection system to prevent clogging of the infiltration system.</p> <p>Verify that the size of the leachate storage unit is based upon the calculated potential for leachate generation and the amount of storage time required.</p> <p>Verify that the following have the approval of the secretary before construction:</p> <ul style="list-style-type: none"> - liner system configurations - leak detection components - overflow containment - freeboard requirements for leachate storage units. <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.60.15.SD. MSWLFs must have methane gas control systems if necessary (SDAR 74:27:12:20).</p>	<p>(NOTE: The Secretary may require MSWLFs to incorporate a methane gas control system into the design of the facility.)</p> <p>Verify that methane gas is controlled as necessary to avoid posing a hazard to occupants of adjacent property and to prevent lateral migration of the gas.</p> <p>Verify that methane gas control systems are designed to prevent fires and explosions due to accumulation of methane concentrations on and off the site of the facility, damage to vegetation on final cover of closed units, and objectionable odors.</p> <p>Verify that MSWLFs install systems to reduce pressure in the interior of the landfill by collecting the gases to prevent them from moving laterally.</p> <p>Verify that methane gas systems do not interfere with or cause failure of the liner system.</p> <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>
<p>SO.60.16.SD. MSWLFs must have a final cover (SDAR 74:27:12:21).</p>	<p>Verify that a minimum of 18 in. of compacted soil material and 6 in. of top soil is placed over MSWLF units that have reached design capacity.</p> <p>(NOTE: Design requirements for MSWLFs apply to all new MSWLFs and lateral expansions of MSWLFs (SDAR 74:27:12:01).)</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
MUNICIPAL SOLID WASTE LANDFILLS SO.65. Operating Criteria SO.65.1.SD. MSWLFs must meet specific operational and maintenance requirements (SDAR 74:27:13:02, 74:27:13:04 through 74:27:13:09, and 74:27:13:12 through 74:27:13:14).	<p>Verify that supervisory personnel are onsite during all hours of operation.</p> <p>Verify that the unloading of wastes is confined to as small an area as practical and the wastes are controlled to ensure proper operation.</p> <p>Verify that recyclable or reusable materials are salvaged in a planned manner that does not interfere with normal operating procedures.</p> <p>Verify that the scattering of paper and other refuse is controlled through the use of litter fences and periodic cleanup.</p> <p>Verify that Type I and IIA facilities provide daily litter cleanup.</p> <p>Verify that Type IIB, III, and IV facilities provide litter cleanup at least weekly.</p> <p>Verify that the working face of the active fill area is limited to as small an area as practical and operations confine windblown solid waste.</p> <p>Verify that before placing cover, all solid waste is spread and compacted evenly in layers not exceeding 2 ft in thickness.</p> <p>Verify that sufficient cover material is stockpiled and protected for use during inclement weather.</p> <p>Verify that a minimum of 6 in. of compacted cover material is placed on all exposed solid waste at the end of each working day.</p> <p>Verify that the MSWLF has the equipment necessary for the following:</p> <ul style="list-style-type: none"> - dust control - excavation - compaction - application of daily cover - backup equipment in case of breakdown <p>Verify that onsite populations of disease vectors are prevented or controlled using techniques appropriate for the protection of human health and for preventing degradation of the environment.</p> <p>Verify that scavenging is prohibited at all facilities.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.65.2.SD. MSWLFs must meet specific requirements for open burning (SDAR 74:27:13:11).</p>	<p>(NOTE: The monthly open burning of agricultural wastes, silvicultural wastes, diseased trees, land clearing debris, untreated wood products, or storm debris which is free from special wastes is allowed).</p> <p>Verify that monthly open burning only burns agricultural wastes, silvicultural wastes, diseased trees, land clearing debris, untreated wood products, or storm debris which is free from special wastes.</p> <p>Verify that burning is confined to a separate area and is supervised at all times.</p>
<p>SO.65.3.SD. MSWLFs must determine tonnage of solid waste delivered to the facility (SDAR 74:27:13:03).</p>	<p>Verify that a MSWLF receiving 25,000 tons or more of solid waste a year is equipped with a scale device approved by the Department of commerce and regulation.</p> <p>Verify that the MSWLF weighs the total amount of solid waste disposed of at the MSWLF and maintains a record of the weight.</p> <p>(NOTE: Type IIB, III, and IV facilities must use procedures approved by the Department through the permitting process for estimating the amount of solid waste received.)</p>
<p>SO.65.4.SD. MSWLFs must maintain monitoring equipment (SDAR 74:27:13:16).</p>	<p>Verify that all environmental and facility performance monitoring systems incorporated into the facility design is operated and maintained throughout the active life and postclosure period of the facility.</p>
<p>SO.65.5.SD. MSWLFs that accept special wastes must handle them according to specific requirements (SDAR 74:27:13:17).</p>	<p>Verify that, if a MSWLF accepts conditionally exempt SQG hazardous waste for disposal, the procedures for disposal and acceptance are outlined in the operational plan that has been approved by the Secretary through the permitting process.</p> <p>Verify that pesticide containers are triple rinsed and punctured or crushed.</p> <p>Verify that petroleum-contaminated soils accepted for disposal are applied to land in a separate area and remediated to less than or equal to 100 ppm as total petroleum hydrocarbons using techniques approved by the Secretary.</p> <p>Verify that regulated medical waste was rendered noninfectious prior to disposal.</p> <p>Verify that dead animals, animal body parts, and viscera accepted for disposal are covered with a minimum of 6 in. of soil within 24 h after receipt.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>(NOTE: A MSWLF may accept large items, including white goods, for disposal. They may be incorporated into the fill or be accumulated in a separate area until they are removed periodically for salvaging.)</p> <p>(NOTE: Regulated asbestos-containing waste materials that are accepted for disposal must comply with the Federal emission standards for asbestos air pollutants. Regulated asbestos-containing waste materials must not be burned.)</p> <p>NOTE: Both used lead-acid batteries found in household waste and waste oil in household waste may be accepted at a MSWLF for disposal.)</p> <p>Verify that bulk or containerized liquid is not accepted for disposal at a MSWLF unless:</p> <ul style="list-style-type: none"> - the waste is household waste - the container is a small container similar in size to that normally found in household wastes and the container is designed to hold liquids for use other than storage - the waste is leachate or gas condensate derived from the landfill unit and is applied on daily or interim cover - the waste is sludge. <p>(NOTE: Sludge, industrial waste, and ash may be accepted for disposal if the proposed methods of handling the wastes are outlined in the operational plan that has been approved through the permitting process.)</p> <p>Verify that equipment containing air-conditioning and refrigeration equipment is emptied of ozone-depleting compounds before disposal.</p> <p>Verify that waste tires accepted at MSWLFs are shredded or quartered prior to disposal.</p> <p>(NOTE: The dedicated storage and disposal area must be separate from the garbage disposal area.)</p>
SO.65.6.SD. MSWLFs must implement a waste screening program (SDAR 74:27:13:19).	<p>Verify that MSWLFs implement a program at the facility for detecting and preventing the disposal of regulated hazardous wastes, regulated PCBs or PCB articles, and other unauthorized wastes.</p> <p>Verify that the program includes at a minimum:</p> <ul style="list-style-type: none"> - random inspections of incoming loads - inspection of suspicious loads - records of the inspections - training of facility personnel to recognize unauthorized hazardous waste and other unauthorized waste - procedures for notifying the secretary if a regulated hazardous waste or other unauthorized waste is discovered at the facility.

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.65.7.SD. MSWLFs must provide personnel training (SDAR 74:27:13:21).</p>	<p>Verify that personnel training includes information pertaining to standard operating procedures including:</p> <ul style="list-style-type: none"> - waste screening - facility monitoring plans - open burning procedures - contingency plan procedures - closure plan contents - postclosure plan contents. <p>Verify that MSWLFs provide training to all full-time employees.</p>
<p>SO.65.8.SD. MSWLFs must manage leachate according to specific guidelines (SDAR 74:27:13:24).</p>	<p>Verify that leachate constituents are analyzed prior to disposal.</p> <p>Verify that leachate is not allowed to accumulate to a depth greater than 12 in. above the final grade at any point in the leachate collection system.</p> <p>(NOTE: Leachate disposal may be accomplished through the following means:</p> <ul style="list-style-type: none"> - surface application of leachate over daily or interim cover areas that are underlaid by both a liner system and a leachate collection system - discharge to a wastewater treatment facility if the leachate quality meets the federal pretreatment requirements of 40 CFR Part 403 and permission is obtained from the operator of the treatment facility - discharge from a leachate storage or treatment lagoon if the leachate quality meets the requirements of 40 CFR Part 133 - other methods approved by the Secretary based on constituents of the leachate, the volume of leachate, and the proposed handling methods.)
<p>SO.65.9.SD. MSWLFs must monitor for methane gas (SDAR 74:27:13:26).</p>	<p>Verify that methane gas concentrations are measured quarterly in all buildings and at the property boundaries.</p> <p>Verify that methane gas does not exceed 25 percent of the lower explosive limit of the gas in facility structures, excluding methane gas system components and does not exceed the lower explosive limit of the gas in soils or air at the property boundary.</p> <p>Verify that, when the methane gas concentration levels are violated, the following actions are taken:</p> <ul style="list-style-type: none"> - immediately take all necessary steps to ensure protection of human health and notify the Secretary - within 7 days of detection, place in the operating record the methane gas levels detected and a description of the steps necessary to protect human

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>health</p> <ul style="list-style-type: none"> - within 60 days of detection, implement a methane gas system that conforms to the contingency plan requirements of SO.85.3.

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>MUNICIPAL SOLID WASTE LANDFILLS</p> <p>SO.67. Emissions</p> <p>SO.67.1.SD. Existing MSWLFs must submit a plan containing a collection and control system and a compliance schedule to the Department (SDAR 74:36:07:34 through 74:36:07:42) [Added April 1998; Revised February 2000; Revised February 2005; Revised February 2008].</p>	<p>(NOTE: This checklist item moved here from AE.155.2.SD.; February 2000.)</p> <p>(NOTE: This checklist item applies to existing municipal solid waste landfills that meet the following conditions:</p> <ul style="list-style-type: none"> - has accepted waste at any time since 8 November 1987 or have additional design capacity available for future waste deposition - has a design capacity greater than or equal to 2.5 million megagrams (MG) or 2.5 million m³ - has a nonmethane organic compound emission rate of 50 MG/yr or more.) <p>Verify that existing MSWLFs submit a plan containing a collection and control system and a compliance schedule to the Department within 1 yr after its emission rate of nonmethane organic compounds equals or exceeds 50 MG/yr.</p> <p>Verify that the collection and control system plan is approved by the Department and implemented.</p> <p>Verify that existing MSWLFs meet the following compliance dates:</p> <ul style="list-style-type: none"> - award contracts within 15 mo after the first annual report showing the emission of nonmethane organic compounds equals or exceeds 50 MG/yr, and - begin construction within 18 mo of the first annual report showing the emission rate of nonmethane organic compounds equals or exceeds 50 MG/yr, and - complete construction within 30 months of the first annual report showing the emission rate of nonmethane organic compounds equals or exceeds 50 MG/yr, or - demonstrate compliance with all applicable requirements within 180 days of completing construction. <p>(NOTE: Existing municipal solid waste landfill must meet the following Federal requirements:</p> <ul style="list-style-type: none"> - the operational standards for collection and control systems in 40 C.F.R. 60.753 (July 1, 2006). - the compliance provisions in 40 C.F.R. 60.755 (July 1, 2006). - the monitoring provisions in 40 C.F.R. 60.756 (July 1, 2006). - the reporting and recordkeeping requirements specified in 40 C.F.R. 60.757 and 60.758 (July 1, 2006).)

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
MUNICIPAL SOLID WASTE LANDFILLS SO.70. Groundwater Monitoring Criteria SO.70.1.SD. MSWLFs must have a groundwater monitoring system (SDAR 74:27:12:19).	Verify that a groundwater monitoring system is incorporated into the design of the landfill. Verify that a groundwater monitoring plan for the disposal facility is submitted to the Secretary for approval. Verify that at a minimum the groundwater monitoring plan includes: <ul style="list-style-type: none"> - detail monitoring systems - monitoring parameters - monitoring frequencies.
SO.70.2.SD. MSWLFs groundwater monitoring systems must meet specific design and installation requirements (SDAR 74:27:19:03).	Verify that groundwater monitoring systems are located and designed to determine the ambient ground water quality and to detect the migration of leachate constituents from a facility. Verify that the monitoring system is designed and installed under the supervision of a qualified groundwater scientist or engineer licensed to do business in the state. Verify that a sufficient number of wells are located upgradient and downgradient of the waste disposal areas to ensure detection of contaminant migration. Verify that at least 3 wells are located immediately downgradient of the waste disposal areas. Verify that monitoring wells are installed by a well driller licensed in the state.
SO.70.3.SD. MSWLFs must meet monitoring and reporting requirements (SDAR 74:27:19:05 and 74:27:19:06).	Verify that MSWLFs monitor parameters semiannually during the active life of the facility and throughout the postclosure period, with at least one sample being collected and analyzed from each designated monitoring well during subsequent sampling events. Verify that the MSWLF collects a minimum of 4 independent samples from each monitoring well and analyze them for ambient groundwater quality during the first semiannual sampling period.

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.70.4.SD. MSWLFs required to perform assessment monitoring must notify the Secretary (SDAR 74:27:20:01 through 74:27:20:03 and 74:27:20:07) [Revised February 2007].</p>	<p>(NOTE: No 2 samples can be collected in the same month.)</p> <p>Verify that the MSWLF notifies the secretary within 14 days after monitoring detects a statistically significant increase over ambient groundwater levels.</p> <p>(NOTE: The groundwater protection standards for all parameters specified in 40 CFR Part 258, Appendix II are the standards specified in 74:03:15:03. If no standards have been established pursuant to 74:03:15:03 the ambient concentration becomes the groundwater protection standard.)</p> <p>(NOTE: This checklist applies to facilities that are required to monitor groundwater which have detected a statistically significant increase in concentration of one or more parameters listed in 40 CFR Part 258, Appendix I over ambient groundwater quality.)</p> <p>Verify that the facility notifies the Secretary in writing within 14 days after initiation of assessment monitoring.</p> <p>Verify that facilities initially sample all designated downgradient wells within 90 days after determining that assessment monitoring program is required.</p> <p>(NOTE: The initial sampling must include all parameters specified in 40 CFR Part 258, Appendix II. See the U. S. TEAM Guide for Appendix I and II parameters.)</p> <p>Verify that the sampling frequency is at least semiannually for all Appendix I parameters and those Appendix II parameters detected as a result of the assessment monitoring.</p> <p>Verify that facilities sample all Appendix II parameters annually.</p> <p>Verify that for any parameter detected in the initial assessment sampling, the facility collects and analyzes samples from each designated monitoring well to establish ambient groundwater quality by collecting a minimum of 4 samples over a 6-mo period with no 2 samples being collected in the same month.</p>
<p>SO.70.5.SD. MSWLFs must notify the secretary of any exceedance in groundwater protection standards (SDAR 74:27:20:06).</p>	<p>Verify that facilities notify the Secretary in writing within 14 days if any groundwater protection standard is exceeded.</p>
<p>SO.70.6.SD. MSWLFs required to perform assessment monitoring may</p>	<p>(NOTE: All facilities required to perform assessment monitoring that exhibit a statistically significant increase above the groundwater protection standard has to perform corrective action unless the facility can demonstrate that a source other</p>

COMPLIANCE CATEGORY:
SOLID WASTE MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>have to perform corrective action (SDAR 74:27:21:01, 74:27:21:03 through 74:27:21:06).</p>	<p>than the facility caused the increase, in which case assessment monitoring continues.)</p> <p>Verify that within 90 days after discovery that corrective action is required, the facility initiates the following:</p> <ul style="list-style-type: none"> - finalize the characterization of the nature and extent of the release - install, at a minimum, one additional monitoring well at the relevant point of compliance - notify the landowners and residents of any land potentially overlying the plume of contamination - analyze the effectiveness of potential corrective measures, including the following: <ul style="list-style-type: none"> - the performance, reliability, and cost of each measure - the time required to begin and complete each measure - the cross-media impacts - any other pertinent data - place a public notice in the official newspaper of the county in which the facility is located, stating the nature and extent of the release and legal descriptions of privately owned land potentially overlying the contaminant plume - present the results of the assessment of the corrective measures to the public at a minimum of one public meeting and record the public concerns expressed at the meeting or meetings. <p>Verify that a report is submitted within 14 days of completion of assessment requirements to the Secretary for approval.</p> <p>Verify that the report recommends a primary plan of corrective action.</p> <p>Verify that upon approval by the Secretary, the corrective action is implemented within 30 days.</p> <p>Verify that the designated monitoring wells are sampled to demonstrate compliance at the relevant point of compliance with the groundwater protection standards for 3 consecutive years.</p> <p>(NOTE: Upon successful demonstration of completion of corrective action, the facility must notify the Secretary within 14 days and may return to detection monitoring.)</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
MUNICIPAL SOLID WASTE LANDFILLS <p>SO.75. Closure Criteria</p> <p>SO.75.1.SD. MSWLFs must meet closure plan and reporting requirements (SDAR 74:27:13:10, 4:27:15:04, and 74:27:15:05).</p>	<p>Verify that MSWLFs have a written closure plan that describes the steps necessary to close the facility at any point during its active life in accordance with the closure performance standard.</p> <p>Verify that MSWLFs are closed in accordance with the approved closure plan.</p> <p>Verify that closure begins within 30 days after reaching maximum fill elevation and is completed within 180 days of initiation of closure.</p> <p>(NOTE: If completion occurs during inclement weather, the Secretary may approve an intermediate cover until final cover and revegetation can be completed.)</p> <p>Verify that MSWLFs notify the secretary in writing at least 90 days before the estimated date of closure.</p>
<p>SO.75.2.SD. MSWLFs must meet specific closure requirements (SDAR 74:27:15:03).</p>	<p>Verify that upon closing a MSWLF, closure activities are commenced within 30 days of the last receipt of wastes and are completed within 180 days of the last receipt of wastes.</p> <p>Verify that MSWLFs meet the following closure requirements:</p> <ul style="list-style-type: none"> - eliminate disease vectors - post the site to indicate that the site is closed to further dumping and to indicate where the new site is located - maintain access control at the facility - fill, grade, and contour the site to eliminate slumping, settling, or ponding of water above any previous active disposal area - maintain and periodically inspect the site until it has settled and no further filling or draining problems exist - maintain a cover of perennial vegetation to include mowing or grazing as necessary that is adequate to prevent excessive erosion or runoff. <p>Verify that the MSWLF has a final cover system that is designed to minimize infiltration and erosion.</p> <p>Verify that the final cover system is comprised of a topsoil layer underlaid by an infiltration layer as follows:</p> <ul style="list-style-type: none"> - the infiltration layer consists of a minimum of 18 in. of earthen material that

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>has a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, whichever is less</p> <ul style="list-style-type: none"> - the topsoil layer consists of a minimum of 6 in. of earthen material that is capable of sustaining perennial plant growth.

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
MUNICIPAL SOLID WASTE LANDFILLS SO.80. Postclosure Care Requirements SO.80.1.SD. MSWLFs must have a postclosure plan (SDAR 74:27:15:09).	<p>Verify that MSWLFs have a written postclosure plan that describes the monitoring and routine maintenance activities that will be carried out during the postclosure care period.</p>
SO.80.2.SD. MSWLFs must meet a postclosure performance standard (SDAR 74:27:15:02 and 74:27:15:08).	<p>Verify that MSWLFs close the facility meeting the following standards:</p> <ul style="list-style-type: none"> - minimize the need for further maintenance - minimize the release and formation of leachate and explosive gases to groundwater, surface water, air, and soils in order to: <ul style="list-style-type: none"> - protect human health - prevent degradation of the environment - provide productive postclosure land use. <p>Verify that facility personnel perform postclosure care activities to ensure that the closure of the facility and of each landfill unit of the facility meets the performance standard.</p> <p>Verify that postclosure use of the property does not disturb the integrity of the final cover, liners, or any other components of the containment system or the functioning of the monitoring system or the functioning of the monitoring systems, unless the secretary approves the activities.</p> <p>Verify that facilities provide postclosure care for 30 yr.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
MUNICIPAL SOLID WASTE LANDFILLS <p>SO.85. Documentation</p> <p>SO.85.1.SD. MSWLFs must provide documentation to be eligible for the small-town exemption (SDAR 74:27:12:25).</p>	Verify that MSWLFs supply written documentation to the Secretary that it meets the following criteria in order to qualify for a small-town exemption: <ul style="list-style-type: none"> - it disposes of less than 20 tons of solid waste daily, based on annual average - it exhibits no groundwater contamination at the disposal site - it is located in an area receiving less than 25 in. of precipitation annually - it has no practicable waste management alternative defined as follows: <ul style="list-style-type: none"> - the MSWLF is not located in an aquifer and at least 100 ft of unweathered till or unweathered shale separate the facility bottom from an aquifer - the MSWLF is located more than 50 mi from a regional MSWLF - the annual cost of solid waste disposal exceeds 1.0 percent of the average annual median household income of the population served. <p>(NOTE: A MSWLF that meets all of the criteria listed above is automatically granted an exemption. If a MSWLF fails to conform with one or more the first 3 criteria, the small-town exemption is void.)</p>
<p>SO.85.2.SD. MSWLFs must have a fire protection plan (SDAR 74:27:13:15).</p>	Verify that the MSWLF has a plan for fire control that includes protection agreements with local fire departments or the availability of adequate onsite fire fighting equipment.
<p>SO.85.3.SD. MSWLFs must develop a contingency plan (SDAR 74:27:13:20).</p>	Verify that the MSWLF developed and updates, as necessary, a contingency plan outlining procedures to be used during emergencies. Verify that the contingency plan contains at a minimum: <ul style="list-style-type: none"> - identification of emergency situations that could arise at the facility including the following: <ul style="list-style-type: none"> - receipt of unauthorized waste - equipment failures - fires - failure of some aspect of the facility design - detection of elevated levels of monitored parameters - names, addresses, and telephone numbers of all persons qualified to act as emergency coordinator, including a designation of the primary coordinator and the order in which others will assume responsibility as alternative - procedures to be used during emergency situations

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.85.4.SD. MSWLFs must meet recordkeeping and reporting requirements (SDAR 74:27:13:22).</p>	<ul style="list-style-type: none"> - procedures for cleanup, personnel protection, packaging, and disposal of unauthorized wastes received - remediation procedures for bringing the facility back into compliance - cost estimates for various remediation scenarios. <p>Verify that the MSWLF maintains the following records:</p> <ul style="list-style-type: none"> - sources, types, and amounts of solid waste received both monthly and annually, including special wastes - recycling or source separation efforts - monitoring, testing, or analytical data required for air, groundwater, surface water, methane gas, leachate, liner system, remediation of special wastes, and any other aspects of the facility design - frequency of waste screening, including test methods and results - filling progression, completion dates, as-built drawings, and closure methods for each landfill - details pertaining to open burning practices at the facility, including dates, types, and amount of waste burned, length of time of burning, complaints, and other pertinent details - records of all inspections - documentation of the small-town exemption criteria if applicable - closure certification - postclosure certification. <p>Verify that the required records and copies of the application and permit (including the operational plan, the contingency plan, the closure plan, the postclosure plan, and the financial assurance information) is maintained at the facility or at another location approved by the Secretary.</p> <p>Verify that an annual report for each calendar year summarizing the groundwater monitoring data and the surface water monitoring data is submitted to the Secretary by 1 April of the following year.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
MEDICAL WASTE <p>SO.110. Containers/Labeling/ Storage Areas</p> <p>SO.110.1.SD. Containers for transport of medical waste offsite must meet specific requirements (SDAR 74:35:01:24).</p>	<p>Verify that containers for regulated medical waste are rigid, leak-resistant, impervious to moisture, resistant to tearing or bursting under normal conditions of use and handling, and sealed to prevent leakage during transport.</p> <p>Verify that treated and untreated sharps and sharps with residual fluids are placed in packaging that is rigid, leak resistant and puncture resistant.</p> <p>Verify that quantities of fluids greater than 20 cubic centimeters are placed in packaging that is break-resistant and tightly lidded or stoppered.</p> <p>(NOTE: Oversized regulated medical waste needs to be placed into containers, but any special handling instructions must be attached to the waste. Generators may use one or more containers to meet these requirements.)</p>
<p>SO.110.2.SD. Reusable medical waste containers must meet decontamination standards (SDAR 74:35:01:25).</p>	<p>Verify that generators, transporters, intermediate handlers, and destination facilities comply with the following requirements for reusing containers.</p> <p>Verify that all nonrigid packaging and inner liners are managed as regulated medical waste and are not reused.</p> <p>Verify that any container used for the storage or transport, or both, of regulated medical waste and designated for reuse once emptied are decontaminated if the container shows signs of visibility contamination.</p> <p>Verify that, if any container used for the storage or transport, or both, of regulated medical waste is for any reason not capable of being rendered free of any visible signs of contamination, the container is managed as regulated medical waste and labeled, marked, and treated or disposed of.</p>
<p>SO.110.3.SD. The storage of regulated medical waste must meet specific requirements (SDAR 74:35:01:26).</p>	<p>(NOTE: These storage requirements apply to regulated medical waste before treatment or disposal onsite or transport offsite.)</p> <p>Verify that the regulated medical waste is stored in a manner and location that maintains the integrity of the packaging and provides protection from the elements.</p> <p>Verify that the regulated medical waste is maintained in a nonputrescible state,</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.110.4.SD. Medical waste must meet labeling requirements prior to transportation offsite (SDAR 74:35:01:27).</p>	<p>using refrigeration when necessary.</p> <p>Verify that outdoor storage areas containing regulated medical waste are locked to prevent unauthorized access.</p> <p>Verify that the regulated medical waste is stored in a manner that affords protection from animals and does not provide a breeding place or a food source for insects and rodents.</p> <p>Verify that all onsite storage of regulated medical waste is in a designated area away from traffic flow patterns and is accessible only to authorized personnel.</p> <p>that containment of regulated medical waste is effected in such a manner that no discharge or release of waste occurs.</p> <p>Verify that, before transporting regulated medical waste or offering it for transport offsite, each package of untreated medical wastes has a water-resistant label affixed to or printed on the outside of the container.</p> <p>Verify that the label includes the words MEDICAL WASTE or INFECTIOUS WASTE or displays the universal biohazard symbol.</p> <p>(NOTE: Plastic bags used as inner packaging need not display a label.)</p> <p>(NOTE: Packages containing treated regulated medical wastes are not required to be labeled according to these requirements.)</p>
<p>SO.110.5.SD. Medical waste must meet marking requirements prior to transportation offsite (SDAR 74:35:01:28).</p>	<p>Verify that each package of regulated medical waste is marked according to the following marking requirements before the waste is transported offsite.</p> <p>Verify that the outermost surface of each package prepared for shipment is marked with a water-resistant identification tag of sufficient dimension to contain the following information:</p> <ul style="list-style-type: none"> - generator's name and address - transporter's name and address - date of shipment - identification of contents as medical waste - the marking contains the generator's name and address <p>Verify that, if the generator has used inner containers, including sharps and fluid containers, each inner container is marked with indelible ink or imprinted with water-resistant tags that contain the generator's name and address.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>MEDICAL WASTE</p> <p>SO.120. Treatment/Disposal</p> <p>SO.120.1.SD. Regulated medical waste must be disposed of as soon as practicable (SDAR 74:35:01:09).</p> <p>SO.120.2.SD. Medical waste treatment facilities other than incinerators must have the proper permits (SDAR 74:35:01:10).</p> <p>SO.120.3.SD. Medical waste incinerators must meet specific emission requirements (SDAR 74:35:01:11 through 74:35:01:17).</p>	<p>Verify that regulated medical waste is disposed of as soon as practicable by incineration or treated by steam sterilization, chemical disinfectant, or an equally effective treatment approved by the Department.</p> <p>Verify that no facility designed to treat or actually treating greater than 200 lb of regulated medical waste for each treatment cycle is constructed or operated unless all appropriate local, state, and permits and approvals have been obtained.</p> <p>(NOTE: A regulated medical waste incinerator with a design capacity of 500 lb/h or greater must also obtain a solid waste permit for the storage of regulated medical waste and the disposal of ash. All existing regulated medical waste incinerators are considered new regulated medical waste incinerators and must meet the appropriate standards.)</p> <p>Verify that incinerators do not allow an air contaminant of a density equal to or darker than that designated as 10 percent opacity (6-min average) to be discharged into the atmosphere.</p> <p>Verify that new regulated medical waste incinerators with a design capacity greater than 200 lb/h do not allow the discharge into the atmosphere of any gases which contain:</p> <ul style="list-style-type: none"> - particulate matter in excess of 0.04 grains per dry standard cubic foot corrected to 7 percent oxygen including condensable particles - hydrogen chloride in excess of 50 ppm, dry volume, corrected to 7 percent oxygen, over any continuous 1-h period or which achieve 90 percent reduction, by weight, in the amount of hydrogen chloride on an hourly basis - carbon monoxide in excess of 100 ppm dry volume corrected to 7 percent oxygen over any continuous 1-h period - sulfur dioxide in excess of 30 ppm dry volume corrected to 7 percent oxygen over any continuous 1-h period - dioxin/furan emissions that exceed 60 grains per billion dry standard cubic feet corrected to 7 percent oxygen.

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.120.4.SD. Medical waste incinerators must complete performance testing (SDAR 74:35:01:18).</p>	<p>Verify that regulated medical waste incinerators conduct performance test showing compliance with applicable rules within 60 days after achieving the maximum output of the facility, but not later than 180 days after initial set-up.</p> <p>Verify that regulated medical waste incinerators with a design capacity of greater than 200 lb/h test for:</p> <ul style="list-style-type: none"> - particulate matter - carbon monoxide - sulfur dioxide - hydrogen chloride. <p>(NOTE: In addition to the above parameters, regulated medical waste incinerators with a design capacity greater than 500 lb/h must test for dioxin/furan emissions.)</p> <p>Verify that regulated medical waste incinerators conduct source tests each year unless the secretary provides otherwise.</p> <p>Verify that regulated medical waste incinerators give the secretary at least 30 days written notice prior to performance testing and safe, adequate testing facilities are provided.</p> <p>(NOTE: Operations during periods of start-up, shutdown, or malfunction are not suitable test periods, and 3 separate runs of each test must be made.)</p>
<p>SO.120.5.SD. Medical waste incinerators must meet specific monitoring requirements (SDAR 74:35:01:19).</p>	<p>Verify that regulated medical waste incinerators with a design capacity greater than 200 lb/h install, calibrate, operate, and maintain instruments for continuously monitoring and recording the emission and operating parameters for carbon monoxide and oxygen.</p> <p>Verify that regulated medical waste incinerators install, calibrate, operate, and maintain devices that continuously monitor and record the temperature of gases leaving the primary and secondary, or final, combustion chambers.</p> <p>Verify that temperature measuring devices have an accuracy of the greater of plus or minus 0.75 percent of the measured temperature or 2.5 deg C.</p> <p>Verify that flames from the burners do not impinge upon the sensors.</p>
<p>SO.120.6.SD. Medical waste incinerators must meet design and operating requirements (SDAR 74:35:01:20).</p>	<p>Verify that regulated medical waste incinerators are equipped with a primary combustion chamber or zone which provides for complete combustion of waste and a secondary combustion chamber or zone which provides for turbulent mixing and a two-second residence time at 1800 deg F or greater for incinerators with design capacity greater than 200 lb/h or a one-second residence time at 1800 deg F</p>

**COMPLIANCE CATEGORY:
SOLID WASTE MANAGEMENT
South Dakota Supplement**

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.120.7.SD. Medical waste incinerators must meet specific waste charging requirements (SDAR 74:35:01:21).</p>	<p>or greater for an incinerator with a design capacity of 200 lb/h or less.</p> <p>Verify that regulated medical waste incinerators meet applicable emission standards during shutdown, and the secondary combustion chamber or combustion zone temperature is maintained at required levels until waste is completely combusted</p> <p>Verify that outlet flow gas temperature does not exceed 300 deg F for new regulated medical waste incinerators with a capacity greater than 200 lb/h unless equivalent control of condensable heavy metals and toxic organics is proved to be achievable by alternate means.</p> <p>Verify that medical waste incinerators are designed and installed to prevent disruption of the combustion process as waste is charged.</p> <p>Verify that batch-fed units are equipped with a lock-out mechanism to prevent charging after start-up.</p> <p>Verify that units with automatic feed systems are equipped with a sealed feeding device capable of preventing combustion upsets during charging.</p> <p>Verify that the volume of the loading system is designed to prevent overcharging to assure complete combustion of the waste.</p> <p>Verify that batch-fed incinerators have interlocks that prevent charging until the secondary chamber exit temperature is established and holding at 1800 deg F and the combustion cycle is complete.</p> <p>Verify that continuously fed incinerators have an interlock system that automatically stops charging if the secondary treatment drops below 1800 deg F for any continuous 15-min period.</p>
<p>SO.120.8.SD. Medical waste incinerators must follow specific radioactive and hazardous waste provisions (SDAR 74:35:01:22).</p>	<p>Verify that neither radioactive waste nor hazardous waste is burned in a regulated medical waste incinerator unless the standards for those materials are also met.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
MEDICAL WASTE <p>SO.125. Documentation</p> <p>SO.125.1.SD. Medical waste destination facilities must meet specific recordkeeping requirements (SDAR 74:35:01:08 and 74:35:01:23).</p>	<p>Verify that destination facilities receiving regulated medical waste from others for decontamination or destruction maintain a log indicating:</p> <ul style="list-style-type: none"> - the approximate quantities of regulated medical waste received by waste category - the date of receipt - the name and address of the generator, intermediate handler, or transporter from whom the waste was received. <p>Verify that the destination facilities that are also regulated medical waste generators and dispose of such waste onsite maintain a log indicating the approximate quantities of regulated medical waste disposed of by waste category and the date of disposal.</p> <p>Verify that the logs are maintained for a period of 3 yr from the date of delivery.</p> <p>Verify that medical waste incinerators maintain a quarterly summary file of daily burning rates and hours of operation and retain the summaries for at least 3 yr.</p> <p>Verify that incinerators subject to monitoring requirements submit summaries of continuous emission and operating data gathered from required monitors to the Department quarterly and retain such data for at least 3 yr.</p> <p>Verify that the Department is notified of any failure of process equipment, air pollution control equipment, or monitoring equipment of 1 h or more in duration or a process operational error which results in an increase in emissions above any allowable rate.</p> <p>Verify that within 5 working days from the occurrence of the failure or operational error a written notice indicating the type of failure or error and measures undertaken to correct the problem is sent to the Department.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement		
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010	
SO.135.		
LANDFILLS		
SO.135.1.SD. February 2007].	[Moved	(NOTE: Moved to SO.140.1.SD., February 2007.)
SO.135.2.SD February 2007].	[Moved	(NOTE: Moved to SO.140.3.SD., February 2007.)
SO.135.3.SD. February 2007].	[Moved	(NOTE: Moved to SO.140.3.SD., February 2007.)
SO.135.4.SD. February 2007].	[Moved	(NOTE: Moved to SO.140.4.SD., February 2007.)
SO.135.5.SD. February 2007].	[Moved	(NOTE: Moved to SO.140.5.SD., February 2007.)
SO.135.6.SD. February 2007].	[Moved	(NOTE: Moved to SO.140.6.SD., February 2007.)
SO.135.7.SD. February 2007].	[Moved	(NOTE: Moved to SO.140.7.SD., February 2007.)
SO.135.8.SD. February 2007].	[Moved	(NOTE: Moved to SO.140.8.SD., February 2007.)
SO.135.9.SD. February 2007].	[Moved	(NOTE: Moved to SO.140.9.SD., February 2007.)

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement		
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010	
SO.135.10.SD. [Moved February 2007].		(NOTE: Moved to SO.140.10.SD., February 2007.)
SO.135.11.SD. [Moved February 2007].		(NOTE: Moved to SO.140.11.SD., February 2007.)
SO.135.12.SD. Nonmunicipal solid waste monofills and other types of sites not specified must meet specific location restrictions (SDAR 74:27:11:01 and 74:27:11:02 through 74:27:11:08.03).		<p>Verify that nonmunicipal solid waste monofills and other types of sites not specified are not located in the following areas:</p> <ul style="list-style-type: none"> - a location that causes significant adverse effect to wildlife, recreation, aesthetic value of an area, or state and federal threatened or endangered species - within the boundaries of a 100-yr floodplain - facilities containing putrescible wastes capable of attracting birds are not located within 5000 ft of an airport runway end used only by piston-type aircraft, and within 10,000 ft of an airport runway end used by turbojet aircraft - within 1000 ft of an occupied dwelling, school, hospital, interstate or primary highway right-of-way, or public park or recreation area - areas that would pose a potential safety hazard to the public - facilities containing putrescible waste or other facilities disposing of materials that may pollute surface water may not be located within 1000 ft of streams, creeks, lakes, reservoirs, or other bodies of water classified for fish life propagation - wetlands - seismic impact zones - unstable areas - within 200 ft of a fault which has had displacement in Holocene time. <p>(NOTE: The FAA must be notified in writing if a MSWLF is located within 5 mi of an airport.)</p>
SO.135.13.SD. Nonmunicipal solid waste monofills and other types of sites not specified must meet specific design requirements (SDAR 74:27:12:01, 74:27:12:06 through 74:27:12:14, 74:27:12:16, and 74:27:12:21).		<p>Verify that each site is accessible by an all-weather access road and all-weather onsite roads are suitable for travel by loaded vehicles</p> <p>Verify that each site open to the public has an all-weather fill area for use during inclement weather</p> <p>Verify that a sign is posted at the entrance stating:</p> <ul style="list-style-type: none"> - the name of the facility - the name and phone number of the person responsible for the site

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.135.14.SD. Nonmunicipal solid waste monofills and other types of sites not specified must have leachate collection and removal systems (SDAR 74:27:12:18 and 74:27:12:01).</p>	<ul style="list-style-type: none"> - days and hours of operation - unloading directions - fees - prohibited wastes other - information as needed. <p>Verify that public access to the site is controlled through the use of fences, gates with locks, and similar controls.</p> <p>Verify that the site has fire lanes in conformance with local ordinances, if applicable.</p> <p>Verify that the site has buffer zones in conformance with local ordinances, if applicable.</p> <p>Verify that surface water drainage and control systems divert normal surface water flow and storm water runoff around or away from areas where waste is present and from other operational areas.</p> <p>Verify that surface water drainage and control systems are designed to minimize mixing of storm water with leachate and to handle the peak flow from a 25-yr, 25-h storm.</p> <p>Verify that storm water and other surface drainage that comes into contact with solid waste or mixes with leachate is considered leachate and is handled accordingly.</p> <p>Verify that sites install a minimum of 2 ft of earthen material capable of maintaining perennial vegetation.</p> <p>Verify that truck washing facilities, if provided, are on a hard-surfaced.</p> <p>(NOTE: Washwater from truck washing is considered leachate and must be handled accordingly.)</p> <p>Verify that waste storage areas, if provided, are designed to store the maximum amount of waste in storage at any one time, be limited to authorized personnel, protect wastes from the elements, and be ventilated to the outdoors.</p> <p>Verify that nonmunicipal solid waste monofills and other types of sites not specified incorporate a leachate collection and removal system into the design of the facility unless exempted from these requirements by the small-town exemption provisions of SO.85.1.</p> <p>Verify that leachate collection and removal systems meet the following requirements:</p> <ul style="list-style-type: none"> - be constructed of materials chemically resistant to the waste to be disposed

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>of in the landfill and to the leachate expected to be generated</p> <ul style="list-style-type: none"> - of sufficient strength and thickness to prevent collapse under pressures exerted by overlying wastes and cover materials and by equipment used at the landfill - designed and operated to prevent clogging through the active life of the facility and the postclosure period - designed to move leachate within the drainage system to a central collection point for treatment or disposal. <p>Verify that the leachate collection and removal system is of the appropriate size and spacing with sumps and pumps or other means to efficiently remove leachate.</p> <p>Verify that sufficient granular material or synthetic fabric filter is placed over the leachate collection system to prevent clogging of the infiltration system.</p> <p>Verify that the size of the leachate storage unit is based upon the calculated potential for leachate generation and the amount of storage time required.</p> <p>Verify that the following have the approval of the Secretary before construction:</p> <ul style="list-style-type: none"> - liner system configurations - leak detection components - overflow containment - freeboard requirements for leachate storage units.
SO.135.15.SD. Nonmunicipal solid waste monofills and other types of sites not specified must meet specific operational and maintenance requirements (SDAR 74:27:13:01, 74:27:13:02, 74:27:13:04 through 74:27:13:07, 74:27:13:09, and 74:27:13:11 through 74:27:13:14).	<p>Verify that supervisory personnel are onsite during all hours of operation.</p> <p>Verify that a site confines the unloading of wastes to as small an area as practical and controls the wastes to ensure proper operation.</p> <p>Verify that recyclables or reusable materials are salvaged in a planned manner that does not interfere with normal operating procedures.</p> <p>Verify that the scattering of paper and other refuse is controlled through the use of litter fences and periodic cleanup.</p> <p>(NOTE: Type I and IIA facilities must provide daily litter cleanup; Type IIB, III, and IV facilities must provide litter cleanup at least weekly.)</p> <p>Verify that the working face of the active fill area is limited to as small an area as practical and conducts its operations to confine windblown solid waste.</p> <p>Verify that sufficient cover material is stockpiled and protected to ensure its availability for daily cover during inclement weather.</p> <p>Verify that a minimum of 6 in. of compacted cover material is placed on all exposed solid waste at the end of each working day.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>(NOTE: Monthly open burning of agricultural wastes, silvicultural wastes, diseased trees, land clearing debris, untreated wood products, or storm debris which is free from special wastes is allowed.)</p> <p>Verify that burning is confined to a separate area and is supervised at all times.</p> <p>Verify that a site has the equipment necessary for the following:</p> <ul style="list-style-type: none"> - dust control - excavation - compaction - application of daily cover - backup equipment in case of breakdown. <p>Verify that onsite populations of disease vectors are controlled or prevented using techniques appropriate for the protection of human health and for preventing degradation of the environment.</p> <p>Verify that scavenging is prohibited at all sites.</p>
SO.135.16.SD. Nonmunicipal solid waste monofills and other types of sites not specified must determine the tonnage of solid waste brought to the site (SDAR 74:27:13:01 and 74:27:13:03).	<p>Verify that a site receiving 25,000 tons or more of solid waste a year is equipped with a scale device approved by the Department of Commerce and Regulation.</p> <p>Verify that the site weighs the total amount of solid waste disposed of at the site and maintains a record of the weight.</p> <p>(NOTE: Type IIB, III, and IV facilities must use procedures approved by the Department through the permitting process for estimating the amount of solid waste received.)</p>
SO.135.17.SD. Nonmunicipal solid waste monofills and other types of sites not specified must close according to an approved plan (SDAR 74:27:13:01 and 74:27:13:10).	<p>Verify that nonmunicipal solid waste monofills and other types of sites not specified are closed in accordance with an approved closure plan.</p> <p>Verify that closure begins within 30 days after reaching maximum fill elevation and completed within 180 days of initiation of closure.</p> <p>(NOTE: If completion occurs during inclement weather, the Secretary may approve an intermediate cover until final cover and revegetation can be completed.)</p>
SO.135.18.SD. Nonmunicipal solid waste monofills and other types of sites not specified must have a	<p>Verify that all facilities have a plan for fire control that includes protection agreements with local fire departments or the availability of adequate onsite fire fighting equipment.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>fire protection plan (SDAR 74:27:13:01 and 74:27:13:15).</p> <p>SO.135.19.SD. Nonmunicipal solid waste monofills and other types of sites not specified must have monitoring systems (SDAR 74:27:13:01 and 74:27:13:16).</p>	<p>Verify that all environmental and facility performance monitoring systems incorporated into the facility design are operated and maintained throughout the active life and postclosure period of the facility.</p>
<p>SO.135.20.SD. Nonmunicipal solid waste monofills and other types of sites not specified must handle special wastes following specific guidelines (SDAR 74:27:13:01 and 74:27:13:17).</p>	<p>Verify that, if a site accepts conditionally exempt SQG hazardous waste for disposal, the procedures for disposal and acceptance are outlined in the operational plan that has been approved by the Secretary through the permitting process.</p> <p>Verify that pesticide containers are triple rinsed and punctured or crushed.</p> <p>Verify that petroleum-contaminated soils accepted for disposal are applied to land in a separate area and remediated to less than or equal to 100 ppm as total petroleum hydrocarbons using techniques approved by the secretary.</p> <p>Verify that regulated medical waste is rendered noninfectious prior to disposal.</p> <p>Verify that dead animals, animal body parts, and viscera accepted for disposal are covered with a minimum of 6 in. of soil within 24 h after receipt.</p> <p>(NOTE: A site may accept large items, including white goods, for disposal. They may be incorporated into the fill or be accumulated in a separate area until they are removed periodically for salvaging.)</p> <p>(NOTE: Regulated asbestos-containing waste materials that are accepted for disposal must comply with the federal emission standards for asbestos air pollutants. Regulated asbestos-containing waste materials must not be burned.)</p> <p>Verify that bulk or containerized liquid is not accepted for disposal unless:</p> <ul style="list-style-type: none"> - the waste is household waste - the container is a small container similar in size to that normally found in household wastes and the container is designed to hold liquids for use other than storage - the waste is leachate or gas condensate derived from the landfill unit and is applied on daily or interim cover - the waste is sludge. <p>(NOTE: Sludge, industrial waste, and ash may be accepted for disposal if the proposed methods of handling the wastes are outlined in the operational plan that</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
SO.135.21.SD. Nonmunicipal solid waste monofills and other types of sites not specified must dispose of waste tires following specific guidelines (SDAR 74:27:13:01 and 74:27:13:17.01).	has been approved through the permitting process.) Verify that equipment containing air conditioning and refrigeration equipment is emptied of ozone-depleting compounds before disposal. Verify that waste tires are not disposed of unless the tire is shredded or quartered, prior to disposal. Verify that the dedicate storage and disposal area is separate from the garbage disposal area.
SO.135.22.SD. Nonmunicipal solid waste monofills and other types of sites not specified must test for hazardous waste (SDAR 74:27:13:01 and 74:27:13:18).	Verify that facilities that generate commercial or industrial waste determine if that waste is a hazardous waste.
SO.135.23.SD. Nonmunicipal solid waste monofills and other types of sites not specified must screen waste received (SDAR 74:27:13:01 and 74:27:13:19).	Verify that a program is implemented at the site for detecting and preventing the disposal of regulated hazardous wastes, regulated PCBs or PCB articles, and other unauthorized wastes. Verify that the program includes at a minimum: <ul style="list-style-type: none">- random inspections of incoming loads- inspection of suspicious loads- records of the inspections- training of facility personnel to recognize unauthorized hazardous waste and other unauthorized waste- procedures for notifying the secretary if a regulated hazardous waste or other unauthorized waste is discovered at the facility.
SO.135.24.SD. Nonmunicipal solid waste monofills and other types of sites not specified must have a contingency plan (SDAR 74:27:13:01 and 74:27:13:20).	Verify that sites develop and update as necessary a contingency plan outlining procedures to be used during emergencies. Verify that the contingency plan contains at a minimum: <ul style="list-style-type: none">- identification of emergency situations that could arise at the facility including the following:

**COMPLIANCE CATEGORY:
SOLID WASTE MANAGEMENT
South Dakota Supplement**

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.135.25.SD. Nonmunicipal solid waste monofills and other types of sites not specified provide training of personnel (SDAR 74:27:13:01 and 74:27:13:21).</p>	<ul style="list-style-type: none"> - receipt of unauthorized waste - equipment failures - fires - failure of some aspect of the facility design - detection of elevated levels of monitored parameters - names, addresses, and telephone numbers of all persons qualified to act as emergency coordinator, including a designation of the primary coordinator and the order in which others will assume responsibility as alternative - procedures to be used during emergency situations - procedures for cleanup, personnel protection, packaging, and disposal of unauthorized wastes received - remediation procedures for bringing the facility back into compliance - cost estimates for various remediation scenarios. <p>Verify that personnel training includes information pertaining to standard operating procedures including:</p> <ul style="list-style-type: none"> - waste screening - facility monitoring plans - open burning procedures - contingency plan procedures - closure plan contents - postclosure plan contents. <p>Verify that sites provide training to all full-time employees.</p>
<p>SO.135.26.SD. Nonmunicipal solid waste monofills and other types of sites not specified must keep specific records (SDAR 74:27:13:01 and 74:27:13:22).</p>	<p>Verify that sites maintain records as follows:</p> <ul style="list-style-type: none"> - sources, types, and amounts of solid waste received both monthly and annually, including special wastes - recycling or source separation efforts - monitoring, testing, or analytical data required for air, groundwater, surface water, methane gas, leachate, liner system, remediation of special wastes, and any other aspects of the facility design - frequency of waste screening, including test methods and results - filling progression, completion dates, as-built drawings, and closure methods for each landfill - details pertaining to open burning practices at the facility, including dates, types, and amount of waste burned, length of time of burning, complaints, and other pertinent details - records of all inspections - documentation of the small-town exemption criteria if applicable - closure certification. <p>Verify that the required records and copies of the application and permit (including the operational plan, the contingency plan, the closure plan, the</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.135.27.SD. Nonmunicipal solid waste monofills and other types of sites not specified must not be excavated without permission (SDAR 74:27:13:01 and 74:27:13:23).</p>	<p>postclosure plan, and the financial assurance information) is maintained at the facility or at another location approved by the Secretary.</p> <p>Verify that an annual report for each calendar year summarizing any groundwater monitoring data and any surface water monitoring data is submitted to the Secretary by 1 April of the following year.)</p> <p>Verify that facility personnel do not excavate, disrupt, or remove any deposited material from an active or discontinued site without first notifying the Secretary in writing and obtaining approval.</p> <p>Verify that the notification includes an operational plan stating:</p> <ul style="list-style-type: none"> - the area involved - the reasons for excavation - the lines and grade-defining limits of the excavation - the estimated number of cubic yards of material to be excavated - the solid waste facility where the excavated material will be disposed of - the estimated time required for the excavation procedures - reclamation plans. <p>Verify that the excavator takes measures during operation to control:</p> <ul style="list-style-type: none"> - erosion - sedimentation - dust - odors - fires - rodents - insects - blowing litter.
<p>SO.135.28.SD. Nonmunicipal solid waste monofills and other types of sites not specified must manage leachate (SDAR 74:27:13:01 and 74:27:13:24).</p>	<p>Verify that leachate constituents are analyzed prior to disposal.</p> <p>Verify that leachate is not allowed to accumulate to a depth greater than 12 in. above the final grade at any point in the leachate collection system.</p> <p>(NOTE: Leachate disposal may be accomplished through the following means:</p> <ul style="list-style-type: none"> - surface application of leachate over daily or interim cover areas that are underlaid by both a liner system and a leachate collection system - discharge to a wastewater treatment facility if the leachate quality meets the federal pretreatment requirements of 40 CFR Part 403 and permission is obtained from the operator of the treatment facility - discharge from a leachate storage or treatment lagoon if the leachate quality meets the requirements of 40 CFR Part 133 - other methods approved by the secretary based on constituents of the

**COMPLIANCE CATEGORY:
SOLID WASTE MANAGEMENT
South Dakota Supplement**

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.135.29.SD. Nonmunicipal solid waste monofills and other types of sites not specified must close in conformance with the performance standard (SDAR 74:27:15:01 and 74:27:15:02).</p>	<p>leachate, the volume of leachate, and the proposed handling methods.)</p> <p>Verify that sites are closed meeting the following standards:</p> <ul style="list-style-type: none"> - minimize the need for further maintenance - minimize the release and formation of leachate and explosive gases to groundwater, surface water, air, and soils in order to: <ul style="list-style-type: none"> - protect human health - prevent degradation of the environment - provide productive postclosure land use. <p>Verify that facility personnel perform postclosure care activities to ensure that the closure of the facility and of each landfill unit of the facility meets the performance standard.</p> <p>Verify that postclosure use of the property does not disturb the integrity of the final cover, liners, or any other components of the containment system or the functioning of the monitoring system or the functioning of the monitoring systems, unless the Secretary approves the activities.</p>
<p>SO.135.30.SD. Nonmunicipal solid waste monofills and other types of sites not specified must meet specific closure requirements (SDAR 74:27:15:01, 74:27:15:03, 74:27:15:04, 74:27:15:05, 74:27:15:08 and 74:27:15:09).</p>	<p>Verify that facilities prepare a written closure plan that describes the steps necessary to close the facility at any point during its active life in accordance with the performance standards.</p> <p>Verify that the facility notifies the Secretary in writing at least 90 days before the estimated date of closure of the facility.</p> <p>Verify that upon closing a site, closure activities are commenced within 30 days of the last receipt of wastes and are completed within 180 days of the last receipt of wastes.</p> <p>Verify that the following closure requirements are met:</p> <ul style="list-style-type: none"> - eliminate disease vectors - post the site to indicate that the site is closed to further dumping and to indicate where the new site is located - cover the facility with 2 ft of earth capable sustaining perennial growth - maintain access control at the facility - fill, grade, and contour the site to eliminate slumping, settling, or ponding of water above any previous active disposal area - maintain and periodically inspect the site until it has settled and no further filling or draining problems exist - maintain a cover of perennial vegetation to include mowing or grazing as necessary that is adequate to prevent excessive erosion or runoff.

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>Verify that facilities provide postclosure care for 30 yr.</p> <p>Verify that facilities prepare a written postclosure plan that describes the monitoring and routine maintenance activities that will be carried out during the postclosure care period.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.140.</p> <p>INERT WASTE LANDFILLS</p> <p>SO.140.1.SD. Rubble sites, construction debris sites, and restricted use sites must meet specific location guidelines (SDAR 74:27:11:01, 74:27:11:02, 74:27:11:03, and 74:27:11:05 through 74:27:11:08.03) [Added February 2007].</p>	<p>(NOTE: Moved from SO.135.1.SD., February 2007.)</p> <p>Verify that rubble sites, construction debris sites, and restricted use sites meet the following location standards:</p> <ul style="list-style-type: none"> - the location does not cause significant adverse effect to wildlife, recreation, aesthetic value of an area, or state and federal threatened or endangered species - facilities are not located within the boundaries of a 100-yr floodplain - facilities are not located within 1000 ft of an occupied dwelling, school, hospital, interstate or primary highway right-of-way, or public park or recreation area - the location does not pose a potential safety hazard to the public facilities containing putrescible waste or other facilities disposing of materials that may pollute surface water are not located within 1000 ft of streams, creeks, lakes, reservoirs, or other bodies of water classified for fish life propagation - facilities are not located in wetlands - facilities are not located in unstable areas. <p>Verify that only rubble or construction or demolition debris that is free of regulated asbestos-containing waste materials, asphalt-containing materials, petroleum products, or other materials that may pollute groundwater are disposed of in gravel pits or quarries.</p>
<p>SO.140.2.SD. Rubble sites, construction debris sites, and restricted use sites must meet specific design and construction requirements (SDAR 74:27:12:01, 74:27:12:06 through 74:27:12:12, 74:27:12:16, and 74:27:12:21) [Added February 2007].</p>	<p>(NOTE: Moved from SO.135.2.SD., February 2007.)</p> <p>Verify that each facility is accessible by an all-weather access road and all-weather onsite roads are suitable for travel by loaded vehicles.</p> <p>Verify that each facility open to the public has an all-weather fill area for use during inclement weather.</p> <p>Verify that each facility has a sign posted at the entrance stating:</p> <ul style="list-style-type: none"> - the name of the facility - the name and phone number of the person responsible for the site - days and hours of operation - unloading directions - fees - prohibited wastes

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.140.3.SD. Rubble sites, construction debris sites, and restricted use sites must meet maintenance requirements (SDAR 74:27:13:01, 74:27:13:04 through 74:27:13:06, 74:27:13:11 through 74:27:13:15) [Added February 2007].</p>	<p>- other information as needed.</p> <p>Verify that public access to the site is controlled through the use of fences, gates with locks, and similar controls.</p> <p>Verify that the facility has fire lanes in conformance with local ordinances, if applicable.</p> <p>Verify that the facility has buffer zones in conformance with local ordinances, if applicable.</p> <p>Verify that surface water drainage and control systems divert normal surface water flow and storm water runoff around or away from areas where waste is present and from other operational areas.</p> <p>Verify that surface water drainage and control systems are designed to minimize mixing of storm water with leachate and to handle the peak flow from a 25-yr, 25-h storm.</p> <p>Verify that storm water and other surface drainage that comes into contact with solid waste or mixes with leachate is considered leachate and is handled accordingly.</p> <p>Verify that facilities install a minimum of 2 ft of earthen material capable of maintaining perennial vegetation.</p> <p>(NOTE: Moved from SO.135.3.SD., February 2007.)</p> <p>Verify that the unloading of wastes is confined to as small an area as practical and the wastes controlled to ensure proper operation.</p> <p>Verify that recyclables or reusable materials are salvaged in a planned manner that does not interfere with normal operating procedures.</p> <p>Verify that the scattering of paper and other refuse is controlled through the use of litter fences and periodic cleanup.</p> <p>(NOTE: Type I and IIA facilities must provide daily litter cleanup. Type IIB, III, and IV facilities must provide litter cleanup at least weekly.)</p> <p>(NOTE: Monthly open burning of agricultural wastes, silvicultural wastes, diseased trees, land clearing debris, untreated wood products, or storm debris which is free from special wastes is allowed.)</p> <p>Verify that permitted open burning is confined to a separate area and burning is supervised at all times.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.140.4.SD. Rubble sites, construction debris sites, and restricted use sites must handle special wastes according to specific guidelines (SDAR 74:27:13:01 and 74:27:13:17) [Added February 2007].</p>	<p>Verify that a facility has the equipment necessary for the following:</p> <ul style="list-style-type: none"> - dust control - excavation - compaction - application of daily cover - backup equipment in case of breakdown <p>Verify that onsite populations of disease vectors are prevented or controlled using techniques appropriate for the protection of human health and for preventing degradation of the environment.</p> <p>Verify that all facilities have a plan for fire control that includes protection agreements with local fire departments or the availability of adequate onsite fire fighting equipment.</p> <p>Verify that scavenging is prohibited at all facilities.</p> <p>(NOTE: Moved from SO.135.4.SD., February 2007.)</p> <p>Verify that, if a facility accepts conditionally exempt SQG hazardous waste for disposal, the procedures for disposal and acceptance are outlined in the operational plan that has been approved by the secretary through the permitting process.</p> <p>Verify that any pesticide containers are triple rinsed and punctured or crushed.</p> <p>Verify that any petroleum-contaminated soils accepted for disposal are applied to land in a separate area and remediated to less than or equal to 100 ppm as total petroleum hydrocarbons using techniques approved by the secretary.</p> <p>Verify that regulated medical waste is rendered noninfectious prior to disposal.</p> <p>Verify that dead animals, animal body parts, and viscera accepted for disposal are covered with a minimum of 6 in. of soil within 24 h after receipt.</p> <p>(NOTE: A facility may accept large items, including white goods, for disposal. They may be incorporated into the fill or be accumulated in a separate area until they are removed periodically for salvaging.)</p> <p>(NOTE: Regulated asbestos-containing waste materials that are accepted for disposal must comply with the federal emission standards for asbestos air pollutants. Regulated asbestos-containing waste materials must not be burned.)</p> <p>Verify that bulk or containerized liquid is not accepted for disposal unless:</p> <ul style="list-style-type: none"> - the waste is household waste - the container is a small container similar in size to that normally found in

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.140.5.SD. Rubble sites, construction debris sites, and restricted use sites must dispose of waste tires following specific requirements (SDAR 74:27:13:01 and 74:27:13:17.01) [Added February 2007].</p>	<p>household wastes and the container is designed to hold liquids for use other than storage</p> <ul style="list-style-type: none"> - the waste is leachate or gas condensate derived from the landfill unit and is applied on daily or interim cover - the waste is sludge. <p>(NOTE: Sludge, industrial waste, and ash may be accepted for disposal if the proposed methods of handling the wastes are outlined in the operational plan that has been approved through the permitting process.)</p> <p>Verify that equipment containing air conditioning and refrigeration equipment is emptied of ozone-depleting compounds before disposal.</p> <p>(NOTE: Moved from SO.135.5.SD., February 2007.)</p> <p>Verify that waste tires are not disposed of unless the tire is shredded or quartered, prior to disposal.</p> <p>Verify that the dedicate storage and disposal area is separate from the garbage disposal area.</p>
<p>SO.140.6.SD. Rubble sites, construction debris sites, and restricted use sites must test for hazardous waste (SDAR 74:27:13:01 and 74:27:13:18) [Added February 2007].</p>	<p>(NOTE: Moved from SO.135.6.SD., February 2007.)</p> <p>Verify that facilities that generate commercial or industrial waste determine if that waste is a hazardous waste.</p>
<p>SO.140.7.SD. Rubble sites, construction debris sites, and restricted use sites must screen waste delivered to the facility (SDAR 74:27:13:01 and 74:27:13:19) [Added February 2007].</p>	<p>(NOTE: Moved from SO.135.7.SD., February 2007.)</p> <p>Verify that facilities implement a program at the facility for detecting and preventing the disposal of regulated hazardous wastes, regulated PCBs or PCB articles, and other unauthorized wastes.</p> <p>Verify that the program includes at a minimum:</p> <ul style="list-style-type: none"> - random inspections of incoming loads - inspection of suspicious loads - records of the inspections - training of facility personnel to recognize unauthorized hazardous waste and other unauthorized waste - procedures for notifying the Secretary if a regulated hazardous waste or other

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.140.8.SD. Rubble sites, construction debris sites, and restricted use sites must train personnel (SDAR 74:27:13:01 and 74:27:13:21) [Added February 2007].</p>	<p>unauthorized waste is discovered at the facility.</p> <p>(NOTE: Moved from SO.135.8.SD., February 2007.)</p> <p>Verify that personnel training includes information pertaining to standard operating procedures including:</p> <ul style="list-style-type: none"> - waste screening - facility monitoring plans - open burning procedures - contingency plan procedures - closure plan contents - postclosure plan contents. <p>Verify that facilities provide training to all full-time employees.</p>
<p>SO.140.9.SD. Rubble sites, construction debris sites, and restricted use sites must keep specific records (SDAR 74:27:13:01 and 74:27:13:22) [Added February 2007].</p>	<p>(NOTE: Moved from SO.135.9.SD., February 2007.)</p> <p>Verify that facilities maintain the following records:</p> <ul style="list-style-type: none"> - sources, types, and amounts of solid waste received both monthly and annually, including special wastes - recycling or source separation efforts - monitoring, testing, or analytical data required for air, groundwater, surface water, methane gas, leachate, liner system, remediation of special wastes, and any other aspects of the facility design - frequency of waste screening, including test methods and results - filling progression, completion dates, as-built drawings, and closure methods for each landfill - details pertaining to open burning practices at the facility, including dates, types, and amount of waste burned, length of time of burning, complaints, and other pertinent details - records of all inspections - documentation of the small-town exemption criteria if applicable - closure certification - postclosure certification. <p>Verify that any required records and copies of the application and permit (including the operational plan, the contingency plan, the closure plan, the postclosure plan, and the financial assurance information) is maintained at the facility or at another location approved by the Secretary.</p> <p>Verify that an annual report for each calendar year summarizing any groundwater monitoring data and surface water monitoring data is submitted to the Secretary by 1 April of the following year.)</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.140.10.SD. Rubble sites, construction debris sites, and restricted use sites must not allow excavation without permission from the secretary (SDAR 74:27:13:01 and 74:27:13:23) [Added February 2007].</p>	<p>(NOTE: Moved from SO.135.10.SD., February 2007.)</p> <p>Verify that facility personnel do not excavate, disrupt, or remove any deposited material from an active or discontinued facility unit without first notifying the secretary in writing and obtaining approval.</p> <p>Verify that the notification includes an operational plan stating:</p> <ul style="list-style-type: none"> - the area involved - the reasons for excavation - the lines and grade-defining limits of the excavation - the estimated number of cubic yards of material to be excavated - the solid waste facility where the excavated material will be disposed of - the estimated time required for the excavation procedures - reclamation plans. <p>Verify that the excavator takes measures during operation to control:</p> <ul style="list-style-type: none"> - erosion - sedimentation - dust - odors - fires - rodents - insects - blowing.
<p>SO.140.11.SD. Rubble sites, construction debris sites, and restricted use sites must meet specific closure requirements (SDAR 74:27:15:01, 74:27:15:03(2), (3)(b), and (4) through (7), 74:27:15:05, 74:27:15:08 and 74:27:15:09) [Added February 2007].</p>	<p>(NOTE: Moved from SO.135.11.SD., February 2007.)</p> <p>Verify that the following closure requirements are met:</p> <ul style="list-style-type: none"> - post the site to indicate that the site is closed to further dumping and to indicate where the new site is located - cover the facility with 2 ft of earth capable of sustaining perennial growth - maintain access control at the facility - fill, grade, and contour the site to eliminate slumping, settling, or ponding of water above any previous active disposal area - maintain and periodically inspect the site until it has settled and no further filling or draining problems exist - maintain a cover of perennial vegetation to include mowing or grazing as necessary that is adequate to prevent excessive erosion. <p>Verify that the facility notifies the Secretary in writing at least 90 days before the estimated date of closure of the facility.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>Verify that the facility provides postclosure care for 30 yr.</p> <p>Verify that the facility prepares a written postclosure plan that describes the monitoring and routine maintenance activities that will be carried out during the postclosure care period.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.145.</p> <p>INCINERATORS</p> <p>SO.145.1.SD. Incineration facilities must comply with specific design requirements (SDAR 74:27:14:02).</p>	<p>Verify that the incineration facility is designed and constructed to protect human health and prevent degradation of the environment, including ambient groundwater quality, surface water quality, and air quality.</p> <p>Verify that the incineration facility is accessible by an all-weather access road and has all-weather onsite roads suitable for travel by loaded vehicles.</p> <p>Verify that the incineration facility has a sign posted at the entrance stating:</p> <ul style="list-style-type: none"> - the name of the facility - the name and phone number of the person responsible for the site - days and hours of operation - unloading directions - fees - prohibited wastes - other information as needed. <p>Verify that public access to the site is controlled through the use of fences, gates with locks, and similar controls.</p> <p>Verify that the litter control devices are of sufficient size to control any blowing litter.</p> <p>Verify that incineration facilities have a fire lane at least 25-ft wide.</p> <p>Verify that incineration facilities have a buffer zone of at least 100 ft, including the fire lane, within the perimeter fence.</p> <p>Verify that incinerator design is adequate for the types of waste proposed to be processed at the facility and meets all the requirements of the air pollution control program (SDAR 74:36) and the regulations concerning disposal of medical waste (SDAR 74:35).</p> <p>Verify that any special waste storage area designs have the approval of the Secretary through the permitting process.</p> <p>Verify that any ash storage area designs have the approval of the Secretary through the permitting process and be sized to contain the maximum volume of ash estimated to be in storage at any one time.</p>
<p>SO.145.2.SD. Incineration facilities must comply with</p>	<p>Verify that supervisory personnel are onsite during all hours of operation.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>specific requirements 74:27:14:03).</p> <p>operational (SDAR</p>	<p>Verify that an incinerator receiving 25,000 tons or more of solid waste a year is equipped with a scale device approved by the Department of Commerce and Regulation.</p> <p>Verify that an incinerator weighs the total amount of solid waste disposed of at the facility and maintain a record of that weight.</p> <p>Verify that Type IIB, III, and IV facilities use procedures approved by the Department through the permitting process for estimating the amount of solid waste received.</p> <p>Verify that incinerators confine the unloading of wastes to as small an area as practical and controls the wastes to ensure proper operation.</p> <p>Verify that incinerators salvage recyclables or reusable materials in a planned manner that does not interfere with normal operating procedures.</p> <p>Verify that incinerators control the scatterings of paper and other refuse through the use of litter fences and periodic cleanup.</p> <p>(NOTE: Type I and IIA facilities must provide daily litter cleanup; Type IIB, III, and IV facilities must provide litter cleanup at least weekly.)</p> <p>Verify that an incinerator has the equipment necessary for the following:</p> <ul style="list-style-type: none"> - dust control - excavation - compaction - application of daily cover - backup equipment in case of breakdown. <p>Verify that an incinerator prevents or controls onsite populations of disease vectors using techniques appropriate for the protection of human health and for preventing degradation of the environment.</p> <p>Verify that scavenging is prohibited.</p> <p>Verify that incinerators have a plan for fire control that includes protection agreements with local fire departments or the availability of adequate onsite fire fighting equipment.</p> <p>Verify that all environmental and facility performance monitoring systems incorporated into the facility design are operated and maintained throughout the active life and postclosure period of the facility.</p> <p>Verify that incinerators that generate commercial or industrial solid waste determine if that waste is hazardous.</p> <p>Verify that wastes to be incinerated are confined to waste storage areas.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.145.3.SD. Incinerators that accept special wastes must handle them according to specific guidelines (SDAR 74:27:13:17).</p>	<p>Verify that the maximum duration for storage of wastes before incineration is limited to 5 days unless prior approval by the secretary is obtained.</p> <p>Verify those waste tires are not incinerated, except when utilized for energy production.</p> <p>Verify that lead acid batteries are not incinerated.</p> <p>Verify that incinerator operation meet medical waste provisions (SDAR 74:35) and air pollution control program requirements (SDAR 74:36).</p> <p>Verify that, if an incinerator accepts conditionally exempt SQG hazardous waste for disposal, the procedures for disposal and acceptance are outlined in the operational plan that has been approved by the Secretary through the permitting process.</p> <p>Verify that pesticide containers have been triple rinsed and punctured or crushed.</p> <p>Verify that regulated medical waste has been rendered noninfectious prior to disposal.</p> <p>(NOTE: Regulated asbestos-containing waste materials that are accepted for disposal must comply with the federal emission standards for asbestos air pollutants. Regulated asbestos-containing waste materials must not be burned.)</p> <p>Verify that bulk or containerized liquid is not accepted for disposal unless:</p> <ul style="list-style-type: none"> - the waste is household waste - the container is a small container similar in size to that normally found in household wastes and the container is designed to hold liquids for use other than storage - the waste is leachate or gas condensate derived from the landfill unit and is applied on daily or interim cover - the waste is sludge. <p>(NOTE: Sludge, industrial waste, and ash may be accepted for disposal if the proposed methods of handling the wastes are outlined in the operational plan that has been approved through the permitting process.)</p> <p>Verify that equipment containing air-conditioning and refrigeration equipment is emptied of ozone-depleting compounds before disposal.</p>
<p>SO.145.4.SD. Incinerators must implement a waste screening program (SDAR</p>	<p>Verify that incinerators implement a program at the facility for detecting and preventing the disposal of regulated hazardous wastes, regulated PCBs or PCB articles, and other unauthorized wastes.</p>

**COMPLIANCE CATEGORY:
SOLID WASTE MANAGEMENT
South Dakota Supplement**

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
74:27:13:19).	<p>Verify that the program includes, at a minimum:</p> <ul style="list-style-type: none"> - random inspections of incoming loads - inspection of suspicious loads - records of the inspections - training of facility personnel to recognize unauthorized hazardous waste and other unauthorized waste - procedures for notifying the Secretary if a regulated hazardous waste or other unauthorized waste is discovered at the facility.
SO.145.5.SD. Incinerators must develop a contingency plan (SDAR 74:27:13:20).	<p>Verify that incinerators develop and update as necessary a contingency plan outlining procedures to be used during emergencies.</p> <p>Verify that the contingency plan contains at a minimum:</p> <ul style="list-style-type: none"> - identification of emergency situations that could arise at the facility including the following: <ul style="list-style-type: none"> - receipt of unauthorized waste - equipment failures - fires - failure of some aspect of the facility design - detection of elevated levels of monitored parameters - names, addresses, and telephone numbers of all persons qualified to act as emergency coordinator, including a designation of the primary coordinator and the order in which others will assume responsibility as alternative - procedures to be used during emergency situations - procedures for cleanup, personnel protection, packaging, and disposal of unauthorized wastes received - remediation procedures for bringing the facility back into compliance - cost estimates for various remediation scenarios.
SO.145.6.SD. Incineration facilities must provide personnel training (SDAR 74:27:13:21).	<p>Verify that personnel training includes information pertaining to standard operating procedures including:</p> <ul style="list-style-type: none"> - waste screening - facility monitoring plans - open burning procedures - contingency plan procedures - closure plan contents - postclosure plan contents. <p>Verify that incinerators provide training to all full-time employees.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.145.7.SD. Incineration facilities must keep specific records (SDAR 74:27:13:22).</p>	<p>Verify that incinerators maintain the following records:</p> <ul style="list-style-type: none"> - sources, types, and amounts of solid waste received both monthly and annually, including special wastes - recycling or source separation efforts - monitoring, testing, or analytical data required for air, groundwater, surface water, methane gas, leachate, liner system, remediation of special wastes, and any other aspects of the facility design - frequency of waste screening, including test methods and results - filling progression, completion dates, as-built drawings, and closure methods - details pertaining to open burning practices at the facility, including dates, types, and amount of waste burned, length of time of burning, complaints, and other pertinent details - records of all inspections - documentation of the small-town exemption criteria if applicable - closure certification - postclosure certification. <p>Verify that required records and copies of the application and permit (including the operational plan, the contingency plan, the closure plan, the postclosure plan, and the financial assurance information) is maintained at the facility or at another location approved by the Secretary.</p> <p>Verify that any required reports are submitted to the secretary by 1 April of the following year.</p>
<p>SO.145.8.SD. Incineration facilities accepting medical waste must comply with specific requirements (SDAR 74:27:14:04).</p>	<p>Verify that incinerators that accept medical waste comply with all incineration regulations and medical waste provisions.</p>

COMPLIANCE CATEGORY: SOLID WASTE MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
SO.160. WASTE TIRE MANAGEMENT	
SO.160.1.SD. Waste tire storage and processing facilities must be designed and operated according to specific requirements (SDAR 74:27:13:17.01).	<p>Verify that a waste tire pile does not have an area greater than 5000 ft or a vertical height greater than 10 ft.</p> <p>Verify that each waste tire pile is surrounded by a 50-ft fire lane.</p> <p>Verify that no more than 100,000 passenger car tires or the equivalent weight of other waste tires or tire-derived products is stored on site at any one time.</p> <p>Verify that operations involving the use of open flames, blow torches, or highly flammable substances are not conducted within 300 ft of a waste tire pile.</p> <p>Verify that all waste tire piles are maintained free of mosquitoes and rodents.</p> <p>Verify that storage of waste tires does not exceed 1 yr.</p> <p>Verify that upon closure of the waste tire storage and processing facility, all waste tires and waste tire products are removed to a permitted solid waste facility.</p>
SO.160.2.SD. Waste tire generators must meet specific requirements (SDAR 74:27:22:05) [Added February 1999].	<p>Verify that on-site storage of less than 700 waste passenger tires or 700 passenger tire equivalents or 10 tires whichever is the greatest weight at a waste tire generator's facility may be conducted without a permit if the following requirements are met.</p> <p>Verify that each waste tire pile is surrounded by a 50-foot fire lane.</p> <p>Verify that operations involving the use of open flames, blow torches, or highly flammable substances are not conducted within 300 ft of a waste tire pile.</p> <p>Verify that all waste tire piles are maintained free of mosquitoes and rodents.</p> <p>Verify that storage of waste tires does not exceed one year.</p>
SO.160.3.SD. Waste tire management must meet specific requirements (SDAR 74:27:22:02) [Added February 1999].	<p>Verify that a waste tire hauler transports waste tires only to one of the following:</p> <ul style="list-style-type: none"> - an in-state solid waste facility permitted to accept waste tires for processing, storage, or disposal - to a person using waste tires according to SO.160.4.SD. - to an out-of-state facility approved or permitted by the responsible agency of that state.

COMPLIANCE CATEGORY:
SOLID WASTE MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>SO.160.4.SD. Waste tire use for structural or construction purposes must meet specific conditions (SDAR 74:27:22:03) [Added February 1999; Revised February 2006].</p>	<p>Verify that the use of loose, baled, or processed waste tires for structural or construction purposes without obtaining a solid waste storage permit meet the following requirements:</p> <ul style="list-style-type: none"> - the construction project is completed within 6 months of receiving the first load of tires - waste tires not used for the project are disposed of within 30 days of completion of the project and in a manner consistent with waste tire management requirements. <p>Verify that any tire from a structure that becomes loose or no longer serves its original intended purpose is considered a waste tire.</p> <p>(NOTE: Baled tires are considered waste tires until they have been approved for use by the Department.)</p>
<p>SO.160.5.SD. Waste tire use and disposal must meet specific conditions (SDAR 74:27:22:04) [Added February 2006].</p>	<p>Verify that a permit is obtained prior to any burial or partial burial of waste tire bales, tire shreds, whole tires or parts thereof.</p> <p>(NOTE: No solid waste permit is required for the burial of tire shreds used in the construction of an on-site wastewater treatment system if the installation is approved.)</p> <p>(NOTE: A farmer or rancher is exempt from the permit requirements when burying his own waste tires on his own property or utilizing his own waste tires for agricultural purposes.)</p>

SECTION 10

STORAGE TANK MANAGEMENT

South Dakota Supplement, February 2010

This section covers the state requirements for Storage Tank Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Definitions

- *Aboveground Release* - any release to the surface of the land or to surface water, including a release from the aboveground portion of an underground storage tank system and releases associated with overfills and transfer operations during deliveries of regulated substances to or dispensing them from a UST system (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Administrator and Regional Administrator* - the Secretary of the Department of Environment and Natural Resources (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Ancillary Equipment* - any device that is used to distribute, meter, or control the flow of petroleum or hazardous substances from an underground storage tank, including piping, fittings, flanges, valves, and pumps (SDAR 74:56:01:01) [Citation Revised April 1998].
- *AST System* - an aboveground stationary storage tank or combination of tanks, including connected piping, excluding any facility defined in this chapter that is covered by Department of Transportation regulation 49 CFR 195 (1985) (SDAR 74:56:03:01) [Citation Revised February 2007].
- *Belowground Release* - any release to the subsurface of the land and to groundwater, including releases from the belowground portions of an underground storage tank system and releases associated with overfills and transfer operations as the regulated substance is delivered to or dispensed from an underground storage tank (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Beneath the Surface of the Ground* - beneath the ground surface or otherwise covered with materials so that physical inspection is precluded (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Cathodic Protection* -
 1. a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell (SDAR 74:56:01:01) [Citation Revised April 1998].
 2. protection of tank system through the application of either galvanic anodes or impressed current (SDAR 74:56:03:01) [Citation Revised February 2007].
- *Cathodic Protection Tester* - a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems and, at a minimum, has education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Coated Steel* - the application of a coating of a dielectric material that is compatible with the material in the metal and that separates the exterior surface of the metal from the environment (SDAR 74:56:01:01) [Citation Revised April 1998].

- *Community Water System* - a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents (SDAR 74:56:01:01) [Added February 2009].
- *Compatibility* - the ability of two or more substances that are in contact with each other to maintain their respective physical or chemical properties (SDAR 74:56:03:01) [Citation revised February 2007].
- *Compatible* - the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for extended periods of time and under varied environmental conditions, i.e., at different temperatures (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Connected Piping* - all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which regulated substances flow (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Consumptive Use* - heating oil burned on the premises (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Corrosion Expert* -
 1. a person who, because of the person's knowledge of the physical sciences and the principles of engineering and mathematics, which was acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks and is certified as being qualified by the National Association of Corrosion Engineers (NACE) or is a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks (SDAR 74:56:01:01) [Citation Revised February 2007]
 2. a person who is qualified in corrosion control of underground or aboveground tank systems because of training in the physical sciences, professional education, or practical experience (SDAR 74:56:03:01) [Citation Revised February 2007; Revised February 2009].
- *Corrosive Substance or Material* - any liquid that causes destruction of human skin tissue or that has a severe corrosion rate on steel or other metallic or nonmetallic substances (SDAR 74:56:03:01) [Citation Revised February 2007].
- *Dispenser* - any equipment that is used to control transfer of regulated substances out of the regulated UST system to an unregulated point of use, such as a vehicle [Added February 2009].
- *Electrical Equipment* - underground equipment which contains dielectric fluid which is necessary for the operation of equipment such as transformers and buried electrical cable (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Electrolyte* - the soil or liquid adjacent to and in contact with the AST systems, including the moisture and other chemicals contained in it; the electrically conductive material between the tank and its environment (SDAR 74:56:03:01) [Citation Revised February 2007].
- *Excavation Area* - the area containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the UST system is placed at the time of installation (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Excluded USTs* - the requirements of SDAR 74:56:01 apply to all owners or operators of an UST system except the following (SDAR 74:56:01:03) [Citation Revised February 2007; Revised February 2010]:
 1. underground storage tank systems containing hazardous wastes listed or identified under Subtitle C of the Solid Waste Disposal Act of 1984, as amended to June 1, 2008, or a mixture of hazardous waste and other regulated substances
 2. any wastewater treatment tank system that is part of a wastewater treatment facility regulated under 402 or 307(b) of the Clean Water Act 1972, as amended to June 1, 2008

3. equipment or machinery that contains regulated substances for operational purposes, such as hydraulic lift tanks and electrical equipment tanks
4. any UST system whose capacity is 110 gal or less
5. any UST system that contains a de minimis concentration of regulated substances and
6. any emergency spill or overflow containment UST system that is expeditiously emptied after use.

- *Existing AST System* - an aboveground storage tank system constructed before 30 November 1987 (SDAR 74:56:03:01) [Citation Revised February 2007].
- *Existing Tank System or Existing Component* - a tank system or component that is used for the storage or treatment of hazardous waste and that is in operation or for which installation commenced on or before 14 July 1986 for HSWA tanks or 7 June 1989 for non-HSWA tanks (SDAR 74:28:21:01) [Revised April 1998; Citation Revised February 2007].
- *Facility* - a system of interconnected tanks, pipes, pumps, vaults, and appurtenant structures, singly or in any combination, which are used or designed to be used for the storage, transmission, or dispensing of regulated substances excluding any facility defined in this SDAR 74:03:30 that is covered by department of transportation regulation 49 CFR 195 (1985) (SDAR 74:56:03:01) [Citation Revised February 2007].
- *Farm Tank* - a tank located on a farm, which is a tract of land devoted to the production of crops or raising of animals, including fish, with its associated residences and improvements, and includes fish hatcheries, rangeland, and nurseries with growing operations (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Flow-Through Process Tank* - a tank that forms an integral part of an industrial or commercial process through which there is a steady or uninterrupted flow of materials during the operation of the process (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Free Product* - a regulated substance in the nonaqueous phase (liquid not dissolved in water) (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Gathering Lines* - any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Groundwater* - waters of the state (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Hazardous Substance Tank System or Hazardous Substance UST* - an underground storage tank system that contains a hazardous substance defined in 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended to July 1, 2008, other than any substance regulated as a hazardous waste under Subtitle C of the Solid Waste Disposal Act of 1984 (RCRA), as amended to July 1, 2008, or a mixture of such substances and petroleum, but which is not a petroleum UST system (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Heating Oil* - a type of fuel oil that is one of eight technical grades; a fuel oil substitute such as kerosene or diesel when it is used for heating purposes (SDAR 74:56:01:01) [Citation Revised April 1998].
- *HSWA Tank* - a tank owned or operated by a small quantity generator, a new underground tank, or a tank which cannot be entered for inspection (SDAR 74:28:21:01) [Added April 1998].
- *Hydraulic Lift Tank* - a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air and hydraulic fluid to operate lifts, elevators, and similar devices (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Interstitial Monitoring* - a leak detection method which entails the surveillance of the space between an UST system's walls and the secondary containment system for a change in steady state conditions (SDAR 74:56:01:01) [Citation Revised April 1998].

- *Inventory Controls* - techniques used to identify a loss of product that are based on volumetric measurements in the tank and reconciliation of those measurements with product delivery and withdrawal records (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Liquid Trap* - sumps, well cellars, and other traps used in association with oil and gas production, gathering, and extraction operations, including gas production plants, for the purpose of collecting oil, water, and other liquids, temporarily collecting liquids for subsequent disposition or reinjection into a production or pipeline stream, or collecting and separating liquids from a gas stream (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Motor Fuel* - a petroleum-based fuel used in the operation of an engine that propels a vehicle for transportation of people or cargo (SDAR 74:56:01:01) [Citation Revised April 1998].
- *New AST System* - an AST system constructed after 30 November 1987 (SDAR 74:56:03:01) [Citation Revised February 2007].
- *New Tank System or New Tank Component* - a tank system or component that will be used for the storage or treatment of hazardous waste for which installation commenced after 14 July 1986 for HSWA tanks and 7 June 1989 for non-HSWA tanks or, for the purposes of 40 CFR 264.193(g)(2) (July 1, 2007) and 40 CFR 265.193(g)(2) (July 1, 2007), for which construction commenced after 14 July 1986 for HSWA tanks and 7 June 1989 for non-HSWA tanks (SDAR 74:28:21:01) [Revised April 1998; Revised February 2008].
- *Noncommercial Purposes* - motor fuel that is not for resale (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Non-HSWA Tank* - a tank which is not owned or operated by a small quantity generator and is either an existing underground tank or a tank that can be entered for inspection (SDAR 74:28:21:01) [Added April 1998].
- *On the Premises Where Stored* - heating oil UST systems that are located on the same property where the stored heating oil is used (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Operational Life* - the period beginning from the time when the installation of the tank system is commenced until it is closed under SDAR 74:03:28:31 (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Operator* - any person in control of, or having responsibility for, the daily operation of the UST system (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Operators* - persons in control of, or having responsibility for, the daily operation of the AST system (SDAR 74:56:03:01) [Citation Revised February 2007].
- *Overfill Release* - a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Owner* - any person who owns or operates an UST system used for storage, use, or dispensing of regulated substances in use on 8 November, 1984, or brought into use after that date; and any person who owned or operated an UST immediately before the discontinuation of its use in the case of any UST system in use before 8 November 1984 (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Owners* - persons who own AST systems used for storage or dispensing of regulated substances (SDAR 74:56:03:01) [Citation Revised February 2007].
- *Person* - an individual, trust, firm, joint stock company, Federal agency, corporation, state, municipality, commission, political subdivision of a state, interstate body, consortium, joint venture, commercial entity, or the United States government (SDAR 74:56:01:01) [Citation Revised April 1998].

- *Petroleum* - crude oil, crude oil fractions, and refined petroleum fractions, including gasoline, kerosene, heating oils, and diesel fuels (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Petroleum Tank System or Petroleum UST* - an UST system that contains an accumulation of petroleum or a mixture of petroleum with de minimis quantities of other regulated substances (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Petroleum Underground Storage Tank* - a tank containing a regulated substance (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Pipeline Facilities (including gathering lines)* - new and existing pipe rights-of-way and any equipment, facilities, or buildings regulated under the Natural Gas Pipeline Safety Act of 1968 (49 USC App. 1672, et seq.), the Hazardous Liquid Pipeline Safety Act of 1979 (49 USC App. 2002, et seq.), all as amended to July 1, 2008, or an intrastate pipeline facility regulated under state laws comparable to the provisions of federal law cited in this definition (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Positive Sampling, Test, or Monitoring Results* - the results of sampling, testing, or monitoring that indicates a release from an UST system has occurred (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Potable Drinking Water Well* - any hole (dug, driven, drilled, or bored) that extends into the earth until it meets ground water that supplies water for a noncommunity public water system or otherwise supplies water for household use (consisting of drinking, bathing, and cooking, or other similar uses) occurred (SDAR 74:56:01:01) [Added February 2009].
- *Regulated Substance* -
 1. a release prevention and release detection system for an underground tank or piping or both. The release prevention part of secondary containment is an underground tank or piping having an inner and outer barrier. Between these two barriers is a space for monitoring. The release detection part of secondary containment is a method of monitoring the space between the inner and outer barriers for a leak or release of regulated substances from the underground tank or piping. Secondary containment must contain regulated substances released from the tank system until they are detected and removed and must prevent the release of regulated substances to the environment at any time during the operational life of the underground storage tank system (SDAR 74:56:01:01) [Citation Revised February 2007; Revised February 2009]
 2. any substance defined in 101(14) of the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, but not including any substance regulated as a hazardous waste under subtitle (C), and petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure, 60 °F and 14.7 pounds per square inch absolute (SDAR 74:56:03:01) [Revised February 2007].
- *Release* -
 1. any spilling, leaking, emitting, discharging, escaping, leaching, or disposing from an underground storage tank into groundwater, surface water, or subsurface soils (SDAR 74:56:01:01) [Citation Revised February 2007]
 2. any spilling, leaking, emitting, discharging, escaping, leaching, or disposing from an aboveground storage system into waters or soils of this state (SDAR 74:56:03:01) [Citation Revised February 2007].
- *Release Detection* - determining whether a release of a regulated substance has occurred from the UST system into the environment or into the interstitial area between the UST system and a secondary barrier around it (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Residential Tank* - a tank located on property used primarily for dwelling purposes (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Secondary Containment* -

1. a system installed around an UST that is designed to prevent a release from migrating beyond the secondary containment system outer wall in the case of a double-walled tank system or excavation area in the case of a liner or vault system before the release can be detected (SDAR 74:03:28:01)
2. containment which prevents any release from an AST system from reaching land or waters outside the containment area (SDAR 74:56:30:01) [Citation Revised February 2007].

- *Septic Tank* - a water-tight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building, whose effluent is distributed for disposal through the soil and whose settled solids and scum are pumped out periodically and hauled to a treatment facility (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Stationary Tanks* - ASTs which do not move, such as tanks fixed permanently in place on foundations, racks, cradles, or stilts, or on the ground. The term does not include tanks mounted on wheels, trolleys, skids, pallets, or rollers; vessels such as 55-gal drums or smaller vessels; produced-substance storage tanks directly related to oil and gas production and gathering operations; or tanks located within a building structure meeting the requirements in SDAR 74:03:30:11 (SDAR 74:56:03:01) [Citation Revised February 2007].
- *Stormwater or Wastewater Collection System* - piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water runoff resulting from precipitation or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Sump* - any pit or reservoir that meets the definition of tank, including troughs or trenches connected to it, that serves to temporarily collect regulated substances (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Surface Impoundment* - a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials, although it may be lined with manmade materials, that is designated to hold an accumulation of regulated substances and that is not an injection well (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Surface Water* - waters of the state (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Tank* - a stationary device designed to contain an accumulation of regulated substances that is constructed of nonearthen materials, such as concrete, steel, or plastic, that provide structural support (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Tightness Testing* - a procedure for testing the ability of a tank system to prevent an inadvertent release of any stored substance into the environment or, in the case of an UST system, intrusion of groundwater into the tank system (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Under-dispenser Sump* - containment underneath a dispenser that prevents leaks from the dispenser from reaching soil or ground water (SDAR 74:56:01:01) [Added February 2009].
- *Underground Area* - an underground room, such as a basement, cellar, shaft, or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Underground Release* - any belowground release (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Underground Storage Tank* - an UST is any tank or combination of tanks, including the underground pipes connected to it, that is used to contain an accumulation of regulated substances, the volumes of which, including the volume of the connected underground pipes, is 10 percent or more beneath the surface of the ground. The term does not include any of the following (SDAR 74:56:01:02) [Citation Revised February 2007]:
 1. a farm or residential tank of 1100 gal or less capacity used for storing motor fuel for noncommercial purposes

2. a tank used for storing heating oil for consumptive use on the premises where stored
3. a septic tank
4. a pipeline facility, including gathering lines, regulated under one of the following:
 - a. the Natural Gas Pipeline Safety Act of 1968 (49 USC App. 1672, et seq.)
 - b. the Hazardous Liquid Pipeline Safety Act of 1979 (49 USC App. 2002, et seq.)
 - c. an intrastate pipeline facility, including gathering lines, regulated under state laws comparable to the provisions of federal law cited to in this subdivision
5. a surface impoundment, pit, pond, or lagoon
6. a storm water or wastewater collection system
7. a flow-through process tank
8. a liquid trap or associated gathering lines directly related to oil or gas production and gathering operations or
9. a storage tank situated in an underground area, such as a basement, cellar, mine working, drift, shaft, or tunnel, if the storage tank is situated on or above the surface of the floor.

The term “underground storage tank” or “UST” does not include any pipes connected to a tank that is described in points 1 to 9, inclusive, of this definition of UST.

- *UST* - underground storage tank (SDAR 74:56:01:01) [Citation Revised April 1998].
- *UST System or Tank System* - an UST and its associated ancillary equipment and containment system (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Unsaturated Zone* - the subsurface zone containing water under pressure less than that of the atmosphere, including water held by capillary forces within the soil and containing air or gases generally under atmospheric pressure, limited above by the ground surface and below by the upper surface of the zone of saturation, i.e., the water table (SDAR 74:56:01:01) [Citation Revised April 1998].
- *Wastewater Treatment Tank* - a tank that is part of a wastewater treatment facility regulated under either Section 402 or 307(b) of the Clean Water Act (1972), as amended to July 1, 2008, and which receives and treats or stores an influent wastewater which contains regulated substances (SDAR 74:56:01:01) [Citation Revised April 1998].

**STORAGE TANK MANAGEMENT
GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS**

REFER TO CHECKLIST ITEMS:

Missing Checklist Items	ST.2.1.SD
Aboveground Storage Tanks	ST.5.1.SD. through ST.5.30.SD.
Emissions/Discharges From Bulk Gasoline Terminal	
The State of South Dakota adopts 40 CFR 60.500 through 60.506 (July 1999), bulk gasoline terminals (SDAR 74:36:07:23).	
Emissions/Discharges From POL Storage Vessels	
The State of South Dakota adopts 40 CFR 60.110 through 60.113, storage vessels of petroleum liquids constructed after 11 June 1973 and prior to 19 May 1978 (SDAR 74:36:07:12). The State of South Dakota adopts 40 CFR 60.110a through 60.115a, storage vessels of petroleum liquids constructed after 18 May 1978 and prior to 23 July 1984 (SDAR 74:36:07:13).	
Emissions/Discharges From VOL Storage Vessels	
The standards of performance for volatile organic liquid storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction, or modification commenced after 22 July 1984, are those in 40 CFR 60.110b to 60.117b, inclusive (July 1, 1998) (SDAR 74:36:07:14).	
(NOTE: With some exceptions, the South Dakota requirements for USTs (SDAR 74:03:28) are fundamentally equivalent to the Federal requirements (40 CFR 280) set forth in categories ST.35 through ST.95 of the U.S. TEAM Guide. Exceptions to and differences from the Federal requirements are accounted for in the appropriate categories of this South Dakota Supplement to the U.S. TEAM Guide.)	
(NOTE: Unlike Federal requirements, South Dakota requirements do not include a list of USTs deferred from requirements; unlike Federal requirements, South Dakota requirements do not include interim prohibitions for deferred UST systems.)	
UST State-Specific	ST.30.1.SD. and ST.30.2.SD.
New or Upgraded USTs	ST.35.1.SD. and ST.35.2.SD.
UST Filling	ST.45.1.SD.
UST Corrosion Protection	ST.50.1.SD. through 50.3.SD.
UST Repairs	ST.55.1.SD. through 55.4.SD.
Release Detection for USTs	
General	ST.60.1.SD. through 60.10.SD.
Petroleum USTs	ST.65.1.SD.
Hazardous Substance USTs	ST.70.1.SD. and ST.70.2.SD.
USTs Connected to Emergency Generators	ST.75.1.SD.
UST Release	ST.80.1.SD. through 80.3.SD.
UST Documentation	ST.90.1.SD. and 90.2.SD.
Changes in Service or Closure of USTs	ST.95.1.SD. through 95.3.SD.
Hazardous Waste Storage Tanks	ST.110.1.SD.

GUIDANCE FOR APPENDIX USERS	
APPENDIX NUMBERS:	APPENDIX TITLES:
10-1	Required Corrective Actions for Responding to Suspected or Confirmed UST System Release
10-2	Manual Tank Monitoring Standards to Meet Release Detection Requirements

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>ST.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
ST.5. ABOVEGROUND STORAGE TANKS	
ST.5.1.SD. AST systems must comply with local ordinances (SDAR 74:56:03:04(6)) [Citation Revised February 2007].	Verify that AST systems comply with all applicable local ordinances.
ST.5.2.SD. Facilities operating AST systems must meet notification requirements (SDAR 74:56:03:02) [Citation Revised February 2007].	<p>Verify that the Department has been notified of the existence of any AST systems.</p> <p>Verify that the Department and any designated local notification agencies have been notified of any AST systems taken out of service since 1 January 1974.</p> <p>(NOTE: Notification requirements do not apply to AST systems taken out of service since 1 January 1974 if the AST systems were removed or closed according to state standards.)</p> <p>Verify that, at least 30 days before the installation of AST systems, the Department and any designated local notification agencies are notified of the planned installation.</p> <p>Verify that, within 30 days after any changes in the information on notification forms, the Department is notified of the changes.</p>
ST.5.3.SD. Submitted plans and specifications for AST systems must be approved by the Department before AST installation (SDAR 74:56:03:02) [Revised February 2007].	Verify that the Department approves of the submitted plans and specifications before installation of the AST system commences.
ST.5.4.SD. ASTs must meet compliance certification requirements (SDAR 74:56:03:03) [Revised February 2007].	<p>Verify that, when new or upgraded AST systems have complied with any of the following requirements, facilities certify to the Department that compliance status has been attained:</p> <ul style="list-style-type: none"> - installation of AST systems (see AE.5.13.SD. and AE.5.16.SD.) - upgrading of existing AST systems (see ST.5.5.SD.) - secondary containment (see ST.5.8.SD. and ST.5.9.SD.)

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.5.5.SD. AST systems must meet construction standards (SDAR 74:56:03:07, 74:56:03:08, and 74:56:03:04(5)) [Revised February 2007].</p>	<ul style="list-style-type: none"> - release detection (see ST.5.19.SD.) - cathodic protection, if applicable (see ST.5.17.SD.). <p>Verify that, within 30 days after any changes in the information on compliance certification forms, the Department is notified of the changes.</p> <p>Verify that AST systems are designed and constructed in accordance with a code of practice developed by nationally recognized associations or independent testing laboratories (e.g., Underwriters' Laboratories 142 (1985) or similar methods approved by the Department).</p> <p>Verify that AST systems constructed of metal and installed in contact with an electrolyte are cathodically protected with sacrificial anodes or an impressed current system.</p> <p>(NOTE: AST systems containing noncorrosive substances do not require internal coatings.)</p> <p>Verify that the pH of tank condensate is monitored biannually, not exceeding 7 1/2 mo between monitoring.</p> <p>Verify that a pH of 6.8 or higher is maintained.</p>
<p>ST.5.6.SD. AST systems must utilize overfill control to prevent inadvertent or accidental releases during filling (SDAR 74:56:03:13(1)) [Citation Revised February 2007].</p>	<p>Verify that releases due to overfills do not occur.</p> <p>Verify that the volume available in ASTs is sufficient to contain the volume of regulated substance to be transferred to the tanks.</p>
<p>ST.5.7.SD. AST systems must utilize specific overfill prevention devices or methods (SDAR 74:56:03:13(2)) [Revised February 2007].</p>	<p>Verify that new and existing AST systems utilize one or more of the following overflow prevention devices or methods:</p> <ul style="list-style-type: none"> - tanks are gauged at frequent [not defined] intervals during regulated substance transfer by personnel who are in communication with the supplier so that flow may be shut down or diverted - tanks are equipped with high level detection devices independent of other gauging equipment, with alarms located either onsite or at a remote site so that the flow of regulated substance may be stopped or diverted - an equivalent device or system, approved by the Department and designed to prevent releases due to overfills, is utilized.

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.5.8.SD. New AST systems must meet secondary containment requirements (SDAR 74:56:03:11) [Revised February 2007].</p>	<p>Verify that secondary containment is installed under and around any new AST systems and consists one or more of the following:</p> <ul style="list-style-type: none"> - combination of double-walled tanks and bottoms - dikes - liners - pads - ponds - impoundments - curbs - ditches - sumps - receiving tanks - other equipment capable of containing the regulated substance stored. <p>Verify that the construction of diking is performed according to professional engineering practices.</p> <p>Verify that plans and specifications for secondary containment systems are submitted to the Department for approval at least 30 days before construction of the systems.</p> <p>Verify that secondary containment under and around AST systems consists of one of the following:</p> <ul style="list-style-type: none"> - native soils - clays - bentonites - artificially constructed material equivalent to 60-mil high-density polyethylene or greater. <p>Verify that secondary containment has an impermeability of at least 10^{-6} cm/s.</p> <p>Verify that secondary containment is constructed and maintained to meet impermeability requirements for the operational life of AST systems.</p> <p>Verify that secondary containments other than double walls or bottoms are capable of containing 110 percent of the volume of the largest tank in the facility.</p> <p>Verify that secondary containment is compatible with the regulated substance stored.</p> <p>Verify that secondary containment is designed and installed to control stormwater.</p> <p>(NOTE: Stormwater or any containment discharge from AST systems may be subject to the requirements of state surface water discharge permit requirements.)</p>

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.5.9.SD. Existing AST systems with a total capacity of 250,000 gallons or more must meet secondary containment requirements (SDAR 74:56:03:12) [Revised February 2007].</p>	<p>(NOTE: Aboveground piping and underground piping connected to ASTs are exempt from the requirements of this checklist item if pressure tests are performed every 5 yr to demonstrate piping integrity.)</p> <p>Verify that existing facilities with a total capacity of 250,000 gal or more have a retaining structures surrounding the AST system are capable of containing 110 percent of the volume of the largest tank onsite.</p> <p>Verify that construction beneath any aboveground piping meets the following requirements:</p> <ul style="list-style-type: none"> - consists of native soils, clays, bentonite, or artificially constructed materials equivalent to 60 mil high-density polyethylene or greater - containment structures have an impermeability of at least 10^{-6} cm/s - containment systems are constructed and maintained so that the required impermeability is met for the operational life of AST systems - containment systems are compatible with the stored regulated substance - containment systems are constructed according to professional engineering practices. <p>Verify that plans and specifications for the secondary containment systems are submitted to the Department for approval at least 30 days before construction of the systems.</p>
<p>ST.5.10.SD. AST systems must meet internal inspection requirements (SDAR 74:56:03:05) [Citation Revised February 2007].</p>	<p>(NOTE: ASTs with a total capacity of 25,000 gal or less are exempt from this requirement.)</p> <p>Verify that an AST system is internally inspected every 2 yr until it complies with one of the following:</p> <ul style="list-style-type: none"> - state construction standards - state overfill control requirements - state secondary containment requirements - state release detection requirements. <p>Verify that, after compliance has been attained, AST systems are internally inspected every 10 yr.</p> <p>Verify that, after compliance has been attained, AST systems which are located at a facility with a total capacity of 250,000 gal or less, and which use only release detection as a means of compliance, are internally inspected every 5 yr.</p>
<p>ST.5.11.SD. Existing AST systems must be upgraded to</p>	<p>(NOTE: Existing AST systems containing noncorrosive substances do not require</p>

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
conform with new AST standards (SDAR 74:56:03:08) [Citation Revised February 2007].	internal coatings.) Verify that existing AST systems are upgraded to meet new AST system standards. Verify that the pH of tank condensate is monitored biannually, not to exceed 7 1/2 mo between sampling. Verify that a pH of 6.8 or higher is maintained. (NOTE: ASTs that are internally coated or lined are not required to be monitored biannually.)
ST.5.12.SD. Proposed sites for new AST systems must be assessed (SDAR 74:56:03:09) [Citation Revised February 2007].	Verify that proposed sites for new AST systems are assessed to establish background conditions if contamination is suspected. Verify that the site assessment report is made available to the Department at least 30 days before the installation of AST systems.
ST.5.13.SD. AST systems must meet installation requirements (SDAR 74:56:03:10(1) through (3)) [Citation Revised February 2007].	Verify that AST systems are installed according to the manufacturer's instructions and to codes of practice developed by nationally recognized associations or independent testing laboratories (e.g., API Standard 650 (1984), UL 142 (1985), or similar methods approved by the Department). Verify that precautions are taken to prevent damage to the AST and piping coatings during installation. Verify that damages occurring during system installation are repaired according to the manufacturer's instructions. Verify that ASTs are supported on well-drained, stable foundations that prevent movement, rolling, or settling of ASTs. Verify that ASTs are designed so that tank bottom corrosion is minimized.
ST.5.14.SD. Regulated substances introduced into AST systems must be compatible with the AST systems (SDAR 74:56:03:15) [Citation Revised February 2007].	Verify that regulated substances introduced into AST systems are compatible with the AST systems.

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.5.15.SD. AST systems must undergo routine inspections (SDAR 74:56:03:17) [Revised February 2007].</p>	<p>Verify that, at a minimum, AST systems are inspected for the following:</p> <ul style="list-style-type: none"> - daily inventory measurements of regulated substance levels (except on weekends and holidays) - if there is secondary containment, weekly inventory measurements of regulated substance levels - monthly reconciliation of inventory records - inspect all overfill devices, release detection instruments, gauges, valves, and operation of all components of cathodic protection systems at least biannually not to exceed 7-1/2 mo between inspections - visually inspect all internal components of ASTs according to state requirements. <p>Verify that detailed records of all inspections are maintained.</p> <p>Verify that defects in AST systems detected during inspections are repaired or replaced according to state requirements (see ST.5.18.SD.).</p> <p>Verify that releases are reported according to state requirements (see ST.5.21.SD.).</p> <p>Verify that corrective actions are taken according to state requirements (see ST.5.22.SD.).</p>
<p>ST.5.16.SD. Metallic ASTs and piping must meet cathodic protection requirements (SDAR 74:56:03:10(4) and (5)) [Citation Revised February 2007].</p>	<p>Verify that metallic piping and bottoms of metallic tanks which come into contact with the ground or an electrolyte are cathodically protected with sacrificial anodes or an impressed current system designed, fabricated, and installed in accordance with codes of practice developed by nationally recognized associations or independent testing laboratories (e.g., NACE Standard RP-02-85, API Standard 1632 (1983), or similar methods approved by the Department).</p> <p>Verify that cathodic protection systems are designed to provide a minimum of 20 yr of protection.</p> <p>Verify that qualified engineers or corrosion experts supervise the design and/or installation of the cathodic protection system.</p> <p>Verify that cathodic protection systems have a monitor or test station.</p> <p>Verify that AST test procedures are performed before the AST systems are placed in operation.</p> <p>Verify that tests are conducted according to codes of practice developed by nationally recognized associations or independent testing laboratories (e.g., API 510 (1983), API Standard 650 (1984), UL 142 (1985), or similar methods</p>

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.5.17.SD. Metallic AST systems with cathodic protection must meet specific requirements (SDAR 74:56:03:14) [Citation Revised February 2007].</p>	<p>approved by the Department.</p> <p>Verify that information demonstrating compliance with cathodic protection requirements is submitted to the Department.</p> <p>Verify that all cathodic protection systems are maintained to provide continuous cathodic protection to the metal components of AST systems in contact with the ground or an electrolyte.</p> <p>Verify that all AST systems with cathodic protection are inspected according to the following minimum inspection schedule:</p> <ul style="list-style-type: none"> - cathodic protection systems are checked within 6 mo of installation for adequate protection - after the initial check, cathodic protection systems are checked annually by a corrosion protection tester - all AST systems with impressed current or sacrificial anodes are inspected every 30 days to ensure continuous operation of the rectifier or anodes - all results are maintained for the life of AST systems. <p>Verify that at least one of the following requirements are met when AST systems are tested:</p> <ul style="list-style-type: none"> - negative potential of at least 0.85 V measured between AST systems and any saturated copper sulphate (Cu_2SO_4) reference electrodes which touch the soil above the piping at a distance of 1 ft from the tanks - negative polarization potential shift of at least 100 mV (0.10 V) is measured between the AST systems and the copper sulphate reference electrodes which have contact with the soil (this shift is the polarization decay determined after the protective current is disconnected) <p>(NOTE: Voltage measurements other than those across the structure electrolyte boundary are considered for valid interpretation of voltage measurements.)</p> <p>Verify that facilities certify compliance of all new and upgraded AST systems with corrosion protection requirements.</p>
<p>ST.5.18.SD. AST system repairs must meet specific requirements (SDAR 74:56:03:16) [Citation Revised February 2007].</p>	<p>Verify that, if a tank interior is repaired and relined, the owners or operators document the following in writing</p> <ul style="list-style-type: none"> - all repairs are permanent - repairs meets the construction standards for new and upgraded AST systems (see ST.5.5.SD.) - tanks and internal liners and coatings are compatible with the regulated substances stored - tanks are inspected internally

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.5.19.SD. New and existing AST systems must meet release detection requirements (SDAR 74:56:03:19) [Citation Revised February 2007].</p>	<ul style="list-style-type: none"> - all welds and patches are installed according to accepted industry codes and practices (e.g., API Standard 1104 (1968)) - prior to repairs, all sludges and sediment materials are removed from tanks and disposed of according to state and Federal standards. <p>Verify that all piping and fittings being repaired are restored to equal to or better than original conditions.</p> <p>Verify that, prior to returning AST systems to service, all piping and fittings are tested according to professional engineering practices to ensure adequacy of repairs.</p> <p>Verify that repair records demonstrating compliance with state standards are maintained.</p> <p>Verify that new and existing AST systems utilize release detection consisting of one of the following:</p> <ul style="list-style-type: none"> - perforated gravity collection pipes or channels in a concrete foundation pad which can be monitored for the presence of a release - internal systems designed to detect any changes in regulated substance levels (e.g., in-tank monitors) capable of continuous monitoring and connected to an external alarm system - external systems designed to detect any releases - comparable release detection systems approved by the Department. <p>Verify that the Department has given approval to install release detection equipment before the equipment is actually installed.</p>
<p>ST.5.20.SD. Facilities with AST systems must have release notification plans (SDAR 74:56:03:20) [Citation Revised February 2007].</p>	<p>Verify that facilities with AST systems have prepared and maintain release notification plans at each AST facility so that plans are readily available in the event of releases.</p> <p>Verify that, at a minimum, the release notification plans include the following information:</p> <ul style="list-style-type: none"> - names and telephone numbers of local and state agencies designated for release notification - name of the AST facility - the name and telephone numbers of the owners and operators - address of the AST facility as well as a legal description of it - identification of ASTs corresponding to the notification form - names of regulated substances stored as well as material safety data sheets for each regulated substance - description of the AST facility, including site maps and surface drainage diagrams.

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.5.21.SD. Suspected releases and spills from AST systems must be reported (SDAR 74:56:03:21) [Citation Revised February 2007].</p>	<p>Verify that release notification plans are updated annually.</p> <p>Verify that facilities with AST systems report all suspected releases immediately to the designated state and local agencies when any of the following conditions exist:</p> <ul style="list-style-type: none"> - testing, sampling, or monitoring results from a release detection method indicates that a release may have occurred - unusual operating conditions (e.g., the sudden loss of regulated substance from AST systems) indicate the presence of regulated substances or vapors outside AST systems - impacts occur in the surrounding area (e.g., evidence of regulated substances or resulting vapors in soils, basements, sewer lines, utility lines, or nearby waters of the state) - gas chromatography or equivalent methods indicate that there are increasing concentrations of total hydrocarbons in soil samples. <p>Verify that spills and overfills of hazardous substances in quantities either exceeding Federal reportable quantities under CERCLA (i.e., 40 CFR 302) (see U.S. TEAM Guide, Section 4, Hazardous Materials Management) or threatening the waters of the state are contained, cleaned up, and reported to the designated state and local agencies immediately.</p> <p>Verify that spills and overfills of petroleum either exceeding 25 gal, causing a sheen on the waters of the state, or threatening the waters of the state are contained, cleaned up, and reported to the designated state and local agencies immediately.</p> <p>Verify that spills or overfills of petroleum are contained and cleaned up immediately.</p> <p>Verify that, if cleanups of petroleum cannot be accomplished within 24 h, the Department, the Division of Emergency Management, and local agencies are notified within 24 h.</p>
<p>ST.5.22.SD. Facilities must meet release investigation and confirmation requirements (SDAR 74:56:03:22) [Citation Revised February 2007].</p>	<p>Verify that, after consultation with the Department, all suspected releases are immediately investigated by the facilities using one of the following procedures:</p> <ul style="list-style-type: none"> - initiation of site investigation of suspected release incidents to determine the total extent of releases - for AST systems with secondary containments, investigations of possible releases into the area between the AST systems and their secondary containment - internal tank inspections - investigation of releases detected by a failed tank or piping test, in the

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.5.23.SD. Facilities must meet initial abatement requirements for corrective action performed in response to releases from AST systems (SDAR 74:56:03:23) [Citation Revised February 2007].</p>	<p>following manner:</p> <ul style="list-style-type: none"> - a check of inventory records to detect a discrepancy indicating that a release may have occurred - isolation from the tank and retesting of the piping within 7 days after initial testing - isolation from the piping and retesting of the tank within 7 days after initial testing - laboratory analysis of soil samples for regulated substance contamination in the areas of the suspected releases - in cases either in which there are discrepancies during inventory reconciliation or for any other suspected releases, investigations are conducted in the following manner: <ul style="list-style-type: none"> - a test of AST systems and piping conducted within 7 days after the initial reporting to the state to determine whether a release may have occurred - laboratory analysis of soil samples for regulated substance contamination in the area of the suspected release - other investigative procedures approved by the Department. <p>Verify that, upon confirmation of releases from AST systems, facilities take the following initial abatement actions:</p> <ul style="list-style-type: none"> - immediately report the releases to the designated state and local agencies - stop any further releases from the AST systems - mitigate fire, safety, and health hazards - if materials were released into secondary containment systems, remove all released materials within 24 h or as determined by the Department - remediate all contaminated soil in accordance with state requirements - report in writing to the Department the initial corrective actions taken, including a verification of AST system repairs or closures if appropriate, within 20 days after confirmation or discovery of releases - conduct Department-approved investigations to determine the possible presence of free product and initiate free product according to state requirements. <p>Verify that, from investigations of the site and from the release, facilities assemble the information considered by the Department to be necessary for completing the initial corrective action measures.</p> <p>Verify that the information is submitted to the Department according to the schedule established by the Department.</p>
<p>ST.5.24.SD. At sites where investigations indicate the presence of free product, facilities must remove free-</p>	<p>Verify that, at sites where investigations indicate the presence of free product, facilities remove free-floating product to the maximum extent practicable.</p> <p>Verify that facilities conduct free product recovery in a manner that does not</p>

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>floating product to the maximum extent practicable (SDAR 74:56:03:24) [Citation Revised February 2007].</p> <p>ST.5.25.SD. When investigations indicate that there may be additional soil contamination from releases, or that contamination has reached the waters of the state, facilities must meet additional site investigation requirements as specified by the Department (SDAR 74:56:03:25) [Citation Revised February 2007].</p> <p>ST.5.26.SD. Records of AST systems must meet specific criteria (SDAR 74:56:03:18(2)) [Citation Revised February 2007].</p> <p>ST.5.27.SD. AST systems temporarily removed from use must meet specific requirements (SDAR</p>	<p>allow contamination to spread into previously uncontaminated areas through untreated discharge or improper disposal techniques.</p> <p>Verify that facilities handle flammable or toxic products in a manner that prevents fires, explosions, or health risks.</p> <p>Verify that, unless directed to do otherwise by the Department, facilities prepare and submit to the Department in writing within 30 days a report on free product removal, providing at least the following information:</p> <ul style="list-style-type: none"> - names of all persons responsible and their qualifications for implementing the free product recovery plan - estimated quantity and type of product onsite and offsite - estimated product thickness in wells, boreholes, and excavations - details of the product recovery system - whether any discharge will take place onsite or offsite during recovery operations - type of treatment and expected effluent quantity from any discharge - the disposition of the recovered product. <p>Verify that, when investigations indicate that there may be additional soil contamination from releases, or that contamination has reached the waters of the state, facilities meet the following requirements as specified by the Department:</p> <ul style="list-style-type: none"> - conduct additional investigations of releases, release sites, and surrounding areas affected by releases to determine the full extent and location of soils contaminated by releases - conduct additional investigations of releases, release sites, and surrounding areas affected by releases to determine the presence of dissolved contamination and free product. <p>Verify that the information collected by additional investigations is submitted to the Department according to the schedule specified by the Department.</p> <p>Verify that required records maintained onsite are immediately available for inspection.</p> <p>Verify that records are made available to the Department at a site within the state boundaries within 24 h.</p> <p>Verify that AST systems temporarily removed from use for less than 3 mo, which still contain regulated substances, continue to have their release detection and corrosion protection devices maintained and operated.</p>

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>74:56:03:27) [Citation Revised February 2007].</p> <p>ST.5.28.SD. ASTs removed from service longer than 24 months must be permanently closed (SDAR 74:56:03:28) [Revised February 2007].</p>	<p>Verify that, for AST systems temporarily removed from use for longer than 3 mo but less than 24 mo, the following requirements are met:</p> <ul style="list-style-type: none"> - all manways are locked or bolted securely - fill lines, gauges, or pump lines are capped or plugged to prevent unauthorized entrance or tampering - if regulated substances are left in tanks, facilities continue to operate and maintain release detection and corrosion protection devices - if regulated substances are removed from tanks, tanks are protected from floatation. <p>Verify that ASTs removed from service longer than 24 mo are permanently closed.</p> <p>Verify that regulated substances, sludge, water, and sediment material are removed from AST systems and are disposed of properly [not defined].</p> <p>Verify that ASTs are rendered free of volatile, explosive, and hazardous vapors.</p> <p>Verify that provisions are made to maintain the vapor-free status of AST systems.</p> <p>Verify that all connecting pipes are disconnected and removed, capped, or plugged.</p> <p>Verify that manways are securely fastened in place to prevent unauthorized access.</p> <p>Verify that tanks are protected from floatation.</p> <p>Verify that, at least 30 days prior to permanent closure, the Department is notified of the closure and an assessment of the AST site is conducted to determine whether any releases have occurred.</p> <p>(NOTE: The site assessment is satisfied if external release detection devices in accordance with state requirements (i.e., SDAR 74:56:03:19) have been in use at the site and have revealed no losses or if other site assessment methods approved by the Department have been in use.)</p> <p>Verify that, if releases are detected, state corrective action requirements (i.e., SDAR 74:56:03:23) are complied with.</p> <p>Verify that records of permanently closed ASTs are maintained to demonstrate compliance with permanent closure requirements.</p> <p>Verify that records are maintained for at least 3 yr after permanent closure by the following:</p> <ul style="list-style-type: none"> - the owners or operators who permanently closed the AST

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.5.29.SD. Permanently closed AST systems must be upgraded before they are returned to use for the storage of regulated substances (SDAR 74:56:03:29) [Citation Revised February 2007].</p>	<ul style="list-style-type: none"> - the current owners or operators of the AST - the Department, if the records have been given to it. <p>Verify that tanks disposed of as junk are tested for the presence of volatile, hazardous, and explosive vapors and rendered vapor-free, if necessary.</p> <p>Verify that tanks disposed of as junk are punched with holes to make them unfit for storage as liquids.</p> <p>Verify that AST systems that have been permanently closed are upgraded to meet state standards (i.e., SDAR 74:56:03:04 and 74:56:03:09) before they are returned to use for the storage of regulated substances.</p>
<p>ST.5.30.SD. Used AST systems must not be reused for the storage of food or potable water (SDAR 74:56:03:29) [Citation Revised February 2007].</p>	<p>Verify that used AST systems are not reused for the storage of food or potable water.</p>

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.30.</p> <p>UST STATE-SPECIFIC</p> <p>ST.30.1.SD. Facilities must complete certification of compliance forms for UST systems (SDAR 74:56:01:12) [Citation Revised April 1998].</p> <p>ST.30.2.SD. By August 8, 2012, UST owners and operators must be trained (SDAR 74:56:01:38.01) [Citation Revised April 1998; Citation Revised February 2010].</p>	<p>Verify that new and upgraded UST systems fill out a Departmental compliance form when they have complied with any of the following requirements:</p> <ul style="list-style-type: none"> - installation of tanks and piping - upgrading existing UST systems - release detection - cathodic protection. <p>Verify that, within 30 days after the changes, facilities notify the Department of any changes to the information stated on compliance forms.</p> <p>Verify that, by August 8, 2012, each owner and operator of any regulated UST system completes a Department-approved training program on the proper operation of underground storage tank systems.</p>

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.35.</p> <p>NEW OR UPGRADED USTs</p> <p>ST.35.1.SD. Facilities must notify the Department of any changes to the information stated on notification forms (SDAR 74:56:01:11(6)) [Citation Revised April 1998].</p> <p>ST.35.2.SD. UST piping located within 1,000 feet of an community water system or potable drinking water well must have secondary containment (SDAR 74:56:01:06 and 74:56:01:10:02) [Added February 2009; Revised February 2010].</p>	<p>Verify that, within 30 days after the changes, facilities notify the Department of any changes to the information stated on notification forms required for new and upgraded USTs.</p> <p>Verify that, if more than 25 feet of existing piping, located within 1,000 feet of an existing community water system or potable drinking water well, is replaced after January 1, 2010, the entire pipe run has secondary containment including under-dispenser sumps.</p> <p>Verify that any new piping installed after January 1, 2010, within 1,000 feet of an existing community water system or any potable drinking water well have secondary containment.</p> <p>Verify that replaced systems are designed, constructed, and installed to allow for proper leak detection in accordance with ST.60.7.SD. (74:56:01:30).</p> <p>Verify that piping is monitored for leaks in accordance with ST.60.9.SD. (74:56:01:30).</p>

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.45.</p> <p>UST FILLING</p> <p>ST.45.1.SD. UST dispenser islands installed after January 1, 2009 located within 1,000 ft of an existing community water system or potable drinking water well must include under dispenser sumps (SDAR 74:56:01:10.03 [Added February 2009]).</p>	<p>Verify that any new dispenser island or replacement island installed after January 1, 2009, includes one or more under-dispenser sump unless the new dispenser is located more than 1,000 feet from any existing community water system or any existing potable drinking water well.</p> <p>Verify that each under-dispenser sump must be designed, constructed, and installed to:</p> <ul style="list-style-type: none"> - prevent releases to the environment - be compatible with the substances carried by the piping - allow for monitoring or releases - be liquid tight.

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
ST.50. UST CORROSION PROTECTION	
ST.50.1.SD. Cathodic protection systems must meet inspection requirements (SDAR 74:56:01:14 [Revised April 1998].)	<p>Verify that cathodic protection systems are maintained so the operation will provide continuous cathodic protection to the metal components of the UST system in contact with the soil.</p> <p>Verify that UST systems equipped with cathodic protection systems are inspected by a cathodic protection tester.</p> <p>Verify that the cathodic protection system is tested within 6 mo after installation or when the soil in the excavation area has compacted to ensure adequate protection and every 3 yr thereafter.</p> <p>Verify that UST systems with impressed currents are checked every 60 days to ensure that systems are operating properly.</p>
ST.50.2.SD. Cathodic protection systems must use specific testing criteria (SDAR 74:56:01:15) [Revised April 1998].	<p>Verify that at least one of the following criteria is met when UST systems are tested:</p> <ul style="list-style-type: none"> - a negative potential of at least 0.85 V measured between the UST systems and saturated copper sulfate reference electrodes touching the soil above the tanks - a negative shift in potential of at least 300 millivolts (mV) (0.30 V) as measured between the UST systems and copper sulfate electrodes (this shift is the difference between the unprotected potential and the potential with the impressed current applied) - a negative polarization potential shift of at least 100 mV (0.10 V) as measured between the UST systems and the copper sulfate reference electrode contacting the soil (this shift is the polarization decay determined after the protective current is disconnected) - other criteria that demonstrate proper levels of corrosion protection, as approved by the Department. <p>(NOTE: Voltage measurements (IR drops) other than those across the electrolyte boundary of the structure are considered valid voltage measurements.)</p> <p>Verify that facilities with new and upgraded UST systems certify to the Department that compliance with testing requirements has been attained.</p>
ST.50.3.SD. Cathodic protection systems must meet	<p>Verify that the results of all cathodic protection testing and system checks, the results of the last 2 inspections performed by a qualified cathodic protection tester,</p>

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
recordkeeping requirements (SDAR 74:56:01:16) [Revised April 1998].	and, if applicable, the results of the last 3 inspections are maintained.

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
ST.55. UST REPAIRS <p>ST.55.1.SD. UST systems containing regulated substances must meet repair standards (SDAR 74:56:01:18) [Citation Revised April 1998].</p>	Verify that, if UST systems undergo repairs, either the persons performing repairs or registered professional engineers certify that all state repair standards have been met. Verify that, as long as UST systems are used to store regulated substances, UST systems are repaired to prevent releases due to structural failure or corrosion. Verify that repairs are performed according to codes of practice developed by a nationally recognized association or an independent testing laboratory. Verify that steel tanks with corrosion holes that are subsequently repaired are retrofitted with cathodic protection systems designed by corrosion experts and maintained and operated according to requirements. Verify that tank tightness tests are performed within 30 days after repairs are performed on UST systems without interstitial monitoring or other release detection that is sampled every 30 days.
<p>ST.55.2.SD. UST systems undergoing relining must meet specific requirements (SDAR 74:56:01:19) [Revised April 1998].</p>	Verify that, if UST systems are repaired or lined, the repair prevents releases due to structural failure or corrosion for the remaining life of the UST systems. Verify that, if UST systems undergo repair or lining, either the persons performing repairs or a registered professional engineer certifies that the following conditions have been met: <ul style="list-style-type: none"> - lining material is compatible with regulated substances stored - tanks are inspected internally, tested ultrasonically, and determined to be structurally sound - tanks had not been repaired or lined previously. Verify that, within 10 yr after lining and every 5 yr thereafter, tanks are inspected internally and found to be structurally sound, with the lining still performing in accordance with original design specifications. (NOTE: The Department may approve other methods for assessing the structural integrity of the tanks if the reliability of the method can be demonstrated to the Department's satisfaction.)
<p>ST.55.3.SD. UST systems with fiberglass-reinforced</p>	Verify that, if fiberglass-reinforced plastic tanks are repaired, repairs prevent releases due to structural failure for the remaining operating life of the UST

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>plastic tanks must meet repair standards (SDAR 74:56:01:20) [Citation Revised April 1998].</p> <p>ST.55.4.SD. Pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced (SDAR 74:56:01:21) [Revised April 1998].</p>	<p>systems.</p> <p>Verify that repairs to fiberglass-reinforced plastic tanks are performed only by representatives authorized by the manufacturer of the tanks.</p> <p>Verify that pipe sections and fittings that have released product as a result of corrosion or other damage are replaced.</p> <p>Verify that repaired, replaced, or tightened lines, fitting, or joints are pressure-tested before being placed back into service.</p> <p>(NOTE: Loose fittings and joints in piping that have been tightened to eliminate leakage may be put back into service.)</p>

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>RELEASE DETECTION FOR USTs</p> <p>ST.60. General</p> <p>ST.60.1.SD. UST release detection systems must meet specific requirements (SDAR 74:56:01:24(1)(d)) [Revised April 1998].</p>	<p>Verify that UST systems are sampled, tested, or checked for releases at least once every 30 days using a method or combination of methods of release detection that meets the following requirements:</p> <ul style="list-style-type: none"> - is capable of detecting a release from any portion of the UST system - is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operating or running condition - is capable of meeting the performance requirements for that method. <p>(NOTE: The possible methods of release detection are:</p> <ul style="list-style-type: none"> - tank tightness and inventory reconciliation - vapor monitoring - groundwater monitoring - automatic tank monitoring - secondary containment and interstitial monitoring - manual tank monitoring - any other method or combination of methods approved by the Department.)
<p>ST.60.2.SD. If facilities plan to use methods of release detection that occur outside the USTs, site assessments must be performed (SDAR 74:56:01:24 (2)) [Revised April 1998].</p>	<p>Verify that, if a method is planned for detecting releases outside of the tank, a site assessment is performed prior to installation of the detection system.</p>
<p>ST.60.3.SD. Tank tightness testing combined with inventory reconciliation must meet specific requirements (SDAR 74:56:01:26) [Revised April 1998].</p>	<p>Verify that a combination of tank system tightness testing and product inventory reconciliation used as a means of release detection meets the following requirements:</p> <ul style="list-style-type: none"> - the tightness test testing is conducted at least once every 5 yr until 22 December 1998, or until 10 yr after the tank is installed or upgraded, whichever is later - the testing is capable of detecting a 0.1 gal/hr leak rate with a probability of detection of 0.95 and a probability of false alarm of 0.05 from any portion of the UST system.

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>Verify that existing tank systems installed before 30 November 1987 are tightness tested at least once every 5 yr for steel UST systems protected from corrosion or constructed of noncorrodible materials and at least annually for all other UST systems.</p> <p>Verify that a combination of tank system tightness testing and product inventory reconciliation used as a means of release detection is conducted monthly to detect a release of at least one percent of flow-through plus 130 gal on a monthly basis, in the following manner:</p> <ul style="list-style-type: none"> - inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day - the equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest 1/8 in. - the regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery - deliveries are made through a drop tube that extends to within one foot of the tank bottom - product dispensing is metered and recorded within an accuracy of 6 in.³ for every 5 gal of product withdrawn - the measurement of any water level in the bottom of the tank is made to the nearest 1/8 in. at least once a month.
ST.60.4.SD. Vapor monitoring must meet specific requirements (SDAR 74:56:01:27) [Revised April 1998].	<p>Verify that vapor monitoring used as a release detection method meets the following requirements:</p> <ul style="list-style-type: none"> - materials used as backfill in the excavation zone (e.g., gravel, sand, crushed rock) are sufficiently porous to readily allow diffusion of vapors from releases into the excavation area - the stored regulated substance (e.g., gasoline) is sufficiently volatile to result in a vapor level that is detectable by the monitoring devices located in the excavation area in the event of a release from the UST system - the measurement of vapors by the monitoring device cannot be rendered inoperative by the groundwater, climatic conditions, or soil moisture so that a release could go undetected for more than 30 days - the level of background contamination in the excavation area does not interfere with detection of releases from the UST system. <p>Verify that vapor monitors allow the threshold level to be preset specifically for the type of regulated substance stored in the tank system and are capable of detecting any significant increase in concentration of total hydrocarbons above background levels.</p>
ST.60.5.SD. Groundwater monitoring must meet specific requirements (SDAR	<p>Verify that groundwater monitoring used as a release detection method meets the following requirements:</p>

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>74:56:01:28) [Revised April 1998].</p> <p>ST.60.6.SD. Automatic tank monitoring must meet specific requirements (SDAR 74:56:01:29) [Citation Revised April 1998].</p>	<ul style="list-style-type: none"> - the regulated substance stored in the UST system is immiscible in water and has a specific gravity of less than one - the groundwater is not more than 20 ft from the ground surface and the hydraulic conductivity of the soils between the UST system and the monitoring wells or devices are not less than 0.01 cm/sec. (For example, the soil should consist of gravels, coarse to medium sands, coarse silts, or other permeable materials) - the monitoring wells or devices are placed in the backfill or as close to it as technically feasible, and the continuous monitoring devices or manual methods that are used must be able to detect the presence of at least 1/8 in. of free product on top of the groundwater in the monitoring wells. <p>Verify that, if automatic tank monitoring or another test of equivalent performance is used to meet release detection requirements, automatic product level monitoring tests has a probability of detection of 0.95 and a probability of false alarm of 0.05.</p>
<p>ST.60.7.SD. Secondary containment combined with interstitial monitoring must meet specific requirements (SDAR 74:56:01:30) [Revised April 1998].</p>	<p>Verify that interstitial monitoring between the UST system and a secondary barrier immediately around it used as a release detection method meets the following requirements:</p> <ul style="list-style-type: none"> - the secondary barrier is designed, constructed, and installed to ensure detection of any release from the UST system so that corrective action can be taken - for double-walled UST systems, the sampling or testing method is capable of detecting a release through the inner wall - for UST systems with a secondary barrier within the excavation area, the sampling or testing method used is capable of detecting any release within the area between the UST system and the secondary barrier and the secondary barrier meets the following conditions: <ul style="list-style-type: none"> - the secondary barrier around the UST system consists of native soils or artificially constructed material that is sufficiently thick and impermeable to permit containment and detection of a release - the liner or barrier is compatible with the regulated substance stored so that a release from the UST system will not cause a deterioration of the barrier - the groundwater, soil moisture, or rainfall will not render the testing or sampling method that is used inoperative so that a release could go undetected for more than 30 days - the site is assessed to ensure that the secondary barrier is always above the groundwater and not in a 25 yr flood plain, unless the barrier and monitoring designs are for use under such conditions - monitoring wells are clearly marked and secured to avoid unauthorized access and tampering

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.60.8.SD. Manual tank monitoring must meet specific requirements (SDAR 74:56:01:31) [Citation Revised April 1998].</p>	<ul style="list-style-type: none"> - for tanks with an internally fitted liner, an automated device can detect a release between the liner wall of the tank and the liner, and the liner is compatible with the substance stored. <p>Verify that only tanks of 1000 gal or less capacity use manual tank monitoring as the sole method of release detection.</p> <p>Verify that tanks of 1001 to 2000 gal, inclusive use manual tank monitoring in combination with tank tightness testing.</p> <p>Verify that tanks of greater than 2000 gal do not use manual tank monitoring.</p> <p>Verify that tank liquid level measurements are taken at the beginning and end of the time period specified in Appendix 10-2, during which no liquid may be added to or removed from the tank.</p> <p>Verify that the level measurements are based on an average of 2 consecutive stick readings at both the beginning and end of the period.</p> <p>Verify that the equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest 1/8 in.</p> <p>Verify that leaks are considered suspect when the variation between beginning and ending measurements exceeds the weekly or monthly standards set forth in Appendix 10-2.</p>
<p>ST.60.9.SD. Underground piping must meet release detection requirements (SDAR 74:56:01:34 and 74:56:01:35) [Added April 1998].</p>	<p>Verify that UST systems have release detection for the underground pressure piping connected to each tank that meets the following requirements:</p> <ul style="list-style-type: none"> - is capable of detecting a release from any portion of the UST system - is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operating or running condition - is capable of meeting the performance requirements for that method. <p>Verify that UST systems with underground piping that conveys a regulated substance under pressure meet the following requirements:</p> <ul style="list-style-type: none"> - are equipped with an automatic line leak detector which alerts the operator to the presence of a leak by restricting or shutting off the flow of regulated substances or triggering an audible or visible alarm, so long as it detects leaks of 3 gal/h at 10 lb psi line pressure within 1 h and is annually tested in accordance with the manufacturer's requirements - have an annual line tightness test, so long as the test can detect a 0.1 gal/h leak rate at one and one-half times the operating pressure, or have monthly monitoring, so long as the selected monitoring methods are designed to

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.60.10.SD. UST systems must meet release detection recordkeeping requirements (SDAR 74:56:01:38) [Revised April 1998].</p>	<p>detect a release from any portion of the underground piping that routinely contains regulated substances.</p> <p>Verify that suction piping systems use one of the following release detection methods:</p> <ul style="list-style-type: none"> - monthly vapor monitoring, groundwater monitoring, or secondary containment combined with interstitial monitoring applied to the piping - line pressure testing every 3 yr - other methods approved by the Department. <p>Verify that written performance claims pertaining to any release detection system used and the manner in which these claims have been justified or tested by the equipment manufacturer or installer are maintained for the 5 yr from the date of installation.</p> <p>Verify that the results of any sampling, testing, or monitoring are maintained for at least 1 yr, except that the results of tank tightness testing are retained until the next test is conducted as required.</p>

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>RELEASE DETECTION FOR USTs</p> <p>ST.65. Petroleum USTs</p> <p>ST.65.1.SD. Petroleum UST systems with underground piping must meet release detection requirements (SDAR 74:56:01:35) [Added April 1998].</p>	<p>Verify that petroleum UST systems with underground piping that convey petroleum under suction comply with the general UST release detection requirements for suction piping (see section ST.60) unless the following conditions are met:</p> <ul style="list-style-type: none"> - the below-grade piping operates at less than atmospheric pressure - the piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released - only one check valve is included in each suction line - the check valve is located directly below and as close as practical to the suction pump.

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>RELEASE DETECTION FOR USTs</p> <p>ST.70. Hazardous Substance USTs</p> <p>ST.70.1.SD. New hazardous substance UST systems must meet release detection requirements (SDAR 74:56:01:32 and 74:56:01:36) [Added April 1998].</p> <p>ST.70.2.SD. Hazardous substance releases from UST systems must be reported (SDAR 74:56:01:51) [Added April 1998].</p>	<p>Verify that new hazardous substance UST systems use secondary containment combined with interstitial monitoring for release detection and notify the Department of this choice within 30 days after bringing the system into use. (NOTE: Any other method of release detection must be approved by the Department.)</p> <p>Verify that piping that conveys regulated hazardous substances uses secondary containment combined with interstitial monitoring for release detection.</p> <p>Verify that within 30 days after confirmation or discovery of a release hazardous substance from a UST to the environment, a written report is submitted to the Department containing the following information:</p> <ul style="list-style-type: none"> - the route of migration of the release to the extent known from available information - characteristics of the surrounding soil, such as soil composition, geology, hydrogeology, and climate - results of any monitoring or sampling conducted in connection with the release, if available - proximity to downgradient drinking water, surface water, and population areas - description of response actions taken or planned. <p>Verify that if sampling or monitoring data relating to the release are not available within 30 days, the results of any monitoring or sampling conducted in connection with the release are submitted to the Department as soon as they become available.</p>

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.75.</p> <p>USTs CONNECTED TO EMERGENCY GENERATORS</p> <p>ST.75.1.SD. After January 1, 2009, any new or replacement UST system used by emergency generators located within 1,000 feet of an existing community water system or any potable drinking water well must have secondary containment (SDAR 74:56:01:03) [Added February 2009].</p>	<p>Verify that, after January 1, 2009, any new or replacement UST system used by emergency generators located within 1,000 feet of an existing community water system or any potable drinking water well has secondary containment.</p> <p>Verify that the secondary containment is monitored for leaks in accordance with 74:56:01:30 (See ST.60.7.SD.).</p>

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
ST.80.	
UST RELEASES	
ST.80.1.SD. [Deleted April 1998].	[Repealed]
ST.80.2.SD. Suspected releases subject to reporting requirements must be investigated immediately (SDAR 74:56:01:42) [Revised April 1998].	<p>Verify that all suspected releases subject to reporting requirements are immediately investigated by use of one of the following procedures:</p> <ul style="list-style-type: none"> - site-specific investigation, under the direction of the Department, of the suspected release incident to determine whether a release occurred - for UST systems with secondary containment, investigation of a possible release into the interstitial area between the UST and the secondary barrier by use of procedures which determine whether interstitial monitoring is working properly [not defined] - for failed tank or piping tightness tests, the following procedures: <ul style="list-style-type: none"> - checking inventory records to detect a discrepancy which indicates a release may have occurred - retesting the piping within 7 days after the initial reporting to the Department to determine whether a release may have occurred - performing laboratory analysis of soil samples for regulated substances in the unsaturated zone and if applicable, visual inspection of the groundwater, under the UST system - for discrepancies during inventory reconciliation or any other suspected releases, the following procedures: <ul style="list-style-type: none"> - tightness testing of tanks and piping conducted, within 7 days after the initial report to the Department, to determine if a release may have occurred - performing laboratory analysis of soil samples regulated substances in the unsaturated zone and if applicable, visual inspection of the groundwater, under the UST system - other equally stringent procedures approved by the Department
ST.80.3.SD. Facilities must respond to suspected or confirmed releases of petroleum, hazardous substances, or a combination of both from UST systems (SDAR 74:56:01:41 and 74:56:01:44) [Revised February 2007].	<p>Verify that facilities respond to suspected or confirmed releases of petroleum, hazardous substances, or a combination of petroleum and hazardous substances from a UST with the corrective actions specified in Appendix 10-1.</p> <p>Verify that any spill or overfill of a regulated substance that exceeds its reportable quantity under CERCLA 1980 (40 C.F.R. § 302, July 1, 1990) or threatens the waters of the state and any spill or overfill of petroleum that exceeds 25 gallons or causes a sheen on surface water is reported to the department immediately.</p> <p>Verify that UST owners or operators contain and clean up any spill or overfill of</p>

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>petroleum of 25 gallons or less immediately.</p> <p>Verify that, if the cleanup is not accomplished within 24 hours, the department or the Division of Emergency Management and applicable local agencies are notified.</p> <p>Verify that all belowground releases from an UST system in any quantity are reported within 24 hours to the Department or the Division of Emergency Management, and applicable local agencies.</p> <p>Verify that immediate notification is provided to the Department or the Division of Emergency Management and applicable local agencies if any environmental impacts occur in the surrounding area from regulated substances, such as vapors or free phase product, in soils, basements, sewer lines, utility lines, or on nearby waters of the state or a gas chromatography or an equivalent method indicated that there is an increasing concentration of total hydrocarbons in a soil sample</p>

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.90.</p> <p>UST DOCUMENTATION</p> <p>ST.90.1.SD. UST records must be maintained onsite and available for inspection (SDAR 74:56:01:23) [Citation Revised April 1998].</p> <p>ST.90.2.SD. [Deleted April 1998].</p>	<p>Verify that all records are maintained onsite and are immediately available for inspection.</p> <p>Verify that records are made available to the Department within 24 h of request.</p> <p>(NOTE: Repealed.)</p>

COMPLIANCE CATEGORY: STORAGE TANK MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
ST.95. CHANGES IN SERVICE OR CLOSURE OF USTs	
ST.95.1.SD. Facilities must notify the Department of any changes to the information stated on notification forms (SDAR 74:56:01:12) [Citation Revised April 1998].	<p>Verify that, within 30 days after the changes, facilities notify the Department of any changes to the information stated on notification forms required for USTs removed from service after 1 January 1974.</p>
ST.95.2.SD. If UST systems are taken out of service for longer than 12 mo, UST systems must be permanently closed (SDAR 74:56:01:54) [Citation Revised April 1998].	<p>Verify that, if UST systems are taken out of service for longer than 12 mo, UST systems are permanently closed.</p> <p>Verify that, at least 30 days before permanent closure, the Department is notified of the intended closure.</p> <p>Verify that, at least 30 days before permanent closure, the excavation areas around UST systems are assessed for releases.</p> <p>(NOTE: For UST closures that took place before 29 November 1987, which involved USTs not removed from the ground or filled with inert solid material, the requirement to assess for releases is satisfied if one of the external monitoring release detection methods allowed by the state is used at the time of closure or if one of the following methods is used at the time of closure:</p> <ul style="list-style-type: none"> - portable gas chromatograph mapping - laboratory analysis of groundwater surrounding the tanks for released product - equivalent site assessment methods approved by the Department.)
ST.95.3.SD. UST systems either temporarily removed from use, temporarily closed, or permanently closed must meet postclosure requirements (SDAR 74:56:01:55) [Revised April 1998].	<p>Verify that, if a UST release is discovered as a result of temporary removal from use, temporary closure, or permanent closure, corrective action requirements are met.</p> <p>Verify that all tanks taken out of service permanently are emptied and either removed from the ground or filled with an inert solid material in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory.</p> <p>Verify that the following records are maintained to demonstrate compliance with closure procedures:</p> <ul style="list-style-type: none"> - release detection for temporary closures

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<ul style="list-style-type: none"> - results of any excavation area assessments, maintained for at least 3 yr by one of the following means: <ul style="list-style-type: none"> - by the owner and operator who took out the UST system - by the current owner and operator of the UST system - by the Department if records cannot be maintained at the closed facility. <p>Verify that, if tanks are reused after closure, the following requirements are met:</p> <ul style="list-style-type: none"> - permanently closed tanks are not brought into use to store regulated substances unless the tanks are upgraded to meet new tank standards for design, installation, and release detection - tanks disposed of as junk are tested for the presence of volatile vapors, rendered vapor-free if necessary, and punched with holes to make them unfit for storage of liquids - tanks are not reused to store food or potable water unless tanks have been completely freed of previously regulated substances, sludges, sediments, and residues - no UST system may be used for the aboveground storage of a regulated substance.

COMPLIANCE CATEGORY:
STORAGE TANK MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ST.110.</p> <p>HAZARDOUS WASTE STORAGE TANKS</p> <p>ST.110.1.SD. Hazardous waste tank systems must be assessed for integrity (SDAR 74:28:25:03 and 74:28:28:03) [Added April 1998; Revised March 2005; Revised February 2009].</p>	<p>Verify that, for an existing tank system that does not have secondary containment meeting the requirements of 40 CFR 264.193 (as of July 1, 2207), a determination is made that the tank system is not leaking or is unfit for use.</p> <p>Verify that the facility has and maintains onsite, a written assessment, reviewed and certified by an independent, registered professional engineer licensed to do business in South Dakota, attesting to the tank system's integrity.</p> <p>(NOTE: For existing tank systems or existing components, a tank system or component installation is considered to have commenced when all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system are obtained and if either:</p> <ul style="list-style-type: none"> - a continuous on-site physical construction or installation program has begun - the owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for physical construction of the site or installation of the tank system to be completed within 1 yr.)

Appendix 10-1

Required Corrective Actions for Responding to Suspected or Confirmed UST System Releases

(Source: SDAR 74:56:01:45 through 74:56:01:49) [Revised April 1998; Revised February 2007]

SDAR 74:56:01:45: Initial Abatement Requirements and Procedures

Upon confirmation of an actual release or discovery of a release in any other manner, facilities must take the following actions:

1. report the release to the designated state and local agencies
2. stop any further release from the UST system
3. mitigate fire and safety hazards
4. remove and properly dispose of visibly accessible contaminated soil from the excavation zone
5. report in writing the initial corrective action taken, including a verification of tank repair or closure (if applicable), to the Department within 20 days after confirmation or discovery of the release
6. conduct an investigation to determine the possible presence of free product and initiate free product removal as soon as practicable
7. submit the information collected during the course of the free product investigation to the Department according to the department's schedule

The department may request the collection and submission of additional information or a corrective action plan for additional soil or groundwater cleanup.

SDAR 74:56:01:46: Additional Abatement Requirements for Hazardous Substances

Facilities with hazardous substance UST systems must take the following additional corrective actions:

1. prevent the flow or addition of hazardous substances by immediately stopping the flow of hazardous substances into the tank systems or secondary containment systems and inspect the system to determine the cause of the release
2. remove hazardous substances from the tank systems or secondary containment systems, as follows:
 - a. if the release was from the tank systems, within 24 h of the detection of the leak, or at the earliest practicable time, remove as much of the hazardous substance as is necessary to prevent further release of hazardous substances to the environment and to allow inspection and repair of the tanks system to be performed
 - b. if the material was released to a secondary containment system, remove all released materials within 24 h or in a timely manner determined by the Department.

SDAR 74:56:01:47:Free Product Removal

At sites where required investigations indicate the presence of free product, free-floating product must be removed to the maximum extent practicable while continuing, as necessary, any actions initiated under Part B and while preparing for subsequent actions required under Part D. In meeting the requirements of this section, facilities must meet the following requirements:

1. conduct free product recovery in such a manner that the actions do not spread contamination into previously uncontaminated areas through untreated discharge or improper disposal techniques
2. handle any flammable products in a manner to prevent fires or explosions
3. unless directed to do otherwise by the Department, prepare and submit within 30 days a free product removal report to the department that provides at least the following information:
 - a. the name of the person or persons responsible for implementing the plan
 - b. the estimated quantity and type of product on-site and the product thickness in wells, boreholes, and excavations
 - c. details of the product recovery system
 - d. whether any discharge will take place on- or off-site during the recovery operation
 - e. the type of treatment and expected effluent quality from any discharge

f. the disposition of the recovered product.

SDAR 74:56:01:48: Additional Site Investigation for Releases from UST Systems

If an investigation indicates that there may be remaining soil contamination from the release that violates applicable state standards, a removal indicates that the released product or product from contaminated soil may have reached groundwater, or the department directs it, the department may be required the owner or operator to conduct additional investigations of the release, the release site, and the surrounding area possibly affected by the release.

The information collected by the owner or operator during the course of the investigations under this section must be submitted in accordance with a schedule established by the department.

The department may require the owner or operator to submit a corrective action plan for contaminated soil or waters of the state, or both.

SDAR 74:56:01:49: Soil and Groundwater Cleanup.

If the Department requires development and submission of a corrective action plan for responding to any contaminated soils or groundwater the facility must meet the following requirements:

1. submit the plan according to a schedule established by the Department
2. implement the plan once it is approved
3. monitor, evaluate, and report the results as required by the Department.

Appendix 10-2

Manual Tank Monitoring Standards to Meet Release Detection Requirements (SDAR 74:56:01:31) [Citation Revised February 2007].

Nominal Tank Capacity	Weekly Standard (one test)	Minimum Duration of Test	Monthly Standard (average of four tests)
550 gal or less	10 gal	36 h	5 gal
551 through 1000 gal	9 gal	44 h	4 gal
1001 through 2000 gal	26 gal	36 h	13 gal
1000 gal (if tank is 48in. by 128 in.)	12 gal	58 h	6 gal

Leaks are considered suspect when the variation between beginning and ending measurements exceeds the weekly or monthly standards.

SECTION 11

TOXIC SUBSTANCES MANAGEMENT

South Dakota Supplement, February 2010

This section covers the state requirements for Toxic Substances Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Adopted Federal Regulations

The State of South Dakota has adopted the National Emission Standards for asbestos air pollutants, which are set forth in 40 CFR 61, Subpart M (SDAR 74:36:08:02).

Definitions

- *Asbestos* - the asbestosiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, actinolite, and tremolite (SDAR 74:31:01:01).
- *Asbestos Abatement Contractor* - a person who contracts to perform an asbestos abatement project (SDAR 74:31:01:01).
- *Asbestos Abatement Project* - any demolition, renovation, repair, construction, or maintenance activity of any public or private facility that involves the repair, enclosure, encapsulation, removal, salvage, handling, or disposal of friable asbestos-containing material with the potential of releasing asbestos fibers into the air or environment (SDAR 74:31:01:01).
- *Asbestos Abatement Supervisor* - a person who provides supervision and direction to workers engaged in an asbestos abatement project, including individuals with the position title of foreman, working foreman, or leadman pursuant to collective bargaining agreements (SDAR 74:31:01:01).
- *Asbestos Abatement Worker* - an employee or agent of a contractor or a facility owner or operator who is engaged in the abatement of asbestos or who performs a task involving more than small-scale, short duration activities (SDAR 74:31:01:01).
- *Certificate* - a document issued by the department to an individual who has shown proof that he has successfully completed the required training course or courses (SDAR 74:31:01:01).
- *Department* - the South Dakota department of environment and natural resources (SDAR 74:31:01:01).
- *Facility* - any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site. For purposes of this definition, any building structure, installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation, or building that was previously subject to this chapter is not excluded, regardless of its current use or function (SDAR 74:31:01:01.01) [Added February 2007].
- *Small-Scale, Short-Duration Activities (SSSD)* - tasks such as but not limited to: removal of asbestos-containing pipe insulation; removal of asbestos-containing gasket on a valve; installation or removal of a small section of drywall; installation of electrical conduits through or proximate to ACM; repairs to asbestos-containing thermal systems insulation that results in the production of an amount of ACM that can be contained

in a single glove bag, or a repair involving encapsulation, enclosure, or removal of small amounts of friable ACM that can be contained in a single pre-fabricated mini-enclosure, that was required in the performance of an emergency or routine maintenance activity and was not intended solely as asbestos abatement. A mini-enclosure shall conform spatially and geometrically to the localized work area in order to perform its intended work function (SDAR 74:31:01:01.07) [Citation Revised February 2008].

**TOXIC SUBSTANCES MANAGEMENT
GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS**

REFER TO CHECKLIST ITEMS:

PCB Management	
Missing Checklist Items	T1.2.1.SD.
General	T1.10.1.SD.
Asbestos Management	
Missing Checklist Items	T2.2.1.SD.
Renovation and Demolition of Asbestos	T2.5.1.SD.
Containing Structures	
Asbestos Personnel Training/Certification	T2.10.1.SD. through T2.10.3.SD.
Asbestos Disposal	T2.15.1.SD.
Radon Management	
Missing Checklist Items	T3.2.1.SD.
LBP Management	
Missing Checklist Items	T4.2.1.SD.

COMPLIANCE CATEGORY:
TOXIC SUBSTANCES MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PCB MANAGEMENT</p> <p>T1.2. Missing Checklist Items</p> <p>T1.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY:
TOXIC SUBSTANCES MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>PCB MANAGEMENT</p> <p>T1.10. General</p> <p>T1.10.1.SD. Notification of PCB activities required under federal requirements must be made to the Secretary (SDAR 74:28:22:01 and 74:28:31:11) [Added February 2010].</p>	<p>(NOTE: Chapter 74:28:31 adopts Federal requirements.)</p> <p>Verify that any person, who is required to provide notification to the EPA of PCB activities, also provides a copy of the notification to the Secretary of the Department of Environment and Natural Resources.</p>

COMPLIANCE CATEGORY:
TOXIC SUBSTANCES MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>ASBESTOS MANAGEMENT</p> <p>T2.2. Missing Checklist Items</p> <p>T2.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY:
TOXIC SUBSTANCES MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>T2.5.</p> <p>RENOVATION AND DEMOLITION OF ASBESTOS CONTAINING STRUCTURES</p> <p>T2.5.1.SD. Asbestos contractors must comply with standards for demolition, transportation, and disposal of asbestos waste (SDAR 74:31:01:02).</p>	<p>Verify that asbestos contractors carrying out asbestos projects comply with the standards for safe demotion, renovation, transportation, and disposal of asbestos in accordance with 40 CFR 61, Subpart M (July 1, 1993) chapter 74:36:08.</p> <p>(NOTE: This checklist item is repeated in T2.15.1.SD.)</p>

COMPLIANCE CATEGORY:
TOXIC SUBSTANCES MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>T2.10.</p> <p>ASBESTOS PERSONNEL TRAINING</p> <p>T2.10.1.SD. Asbestos abatement contractors, supervisors, and workers must be certified (SDAR 74:31:02:05 and 74:31:02:06)</p> <p>T2.10.2.SD. Certified persons must have copies of their current certificates available where they are conducting work (SDAR 74:31:01:03).</p> <p>T2.10.3.SD. At least one certified contractor or supervisor must be present at an asbestos abatement project (SDAR 74:31:01:05).</p>	<p>Verify that asbestos abatement contractors, supervisors, and workers are certified.</p> <p>Verify that certified persons have copies of their current certificates issued by the department at the location where they are conducting work.</p> <p>Verify that at least one certified contractor or supervisor is present at the worksite of an asbestos abatement project at all times while work is in progress.</p>

COMPLIANCE CATEGORY:
TOXIC SUBSTANCES MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>T2.15.</p> <p>ASBESTOS DISPOSAL</p> <p>T2.15.1.SD. Asbestos contractors must comply with standards for demolition, transportation, and disposal of asbestos waste (SDAR 74:31:01:02).</p>	<p>Verify that asbestos contractors carrying out asbestos projects comply with the standards for safe demolition, renovation, transportation, and disposal of asbestos in accordance with 40 CFR 61, Subpart M (July 1, 1993) chapter 74:36:08.</p> <p>(NOTE: This checklist item is repeated in T2.5.1.SD.)</p>

COMPLIANCE CATEGORY:
TOXIC SUBSTANCES MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>RADON GAS</p> <p>T3.2. Missing Checklist Items</p> <p>T3.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY:
TOXIC SUBSTANCES MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>LEAD-BASED PAINT</p> <p>T4.2. Missing Checklist Items</p> <p>T4.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

SECTION 12

WASTEWATER MANAGEMENT

South Dakota Supplement, February 2010

This section covers the state requirements for Wastewater Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Definitions

- *Absorption Bed* - a subsurface absorption system which consists of excavations wider than 3 ft each, containing a minimum depth of 12 in. of clean aggregate, together with a system of absorption lines, through which effluent may seep or leach into the surrounding soils (South Dakota Administrative Rules (SDAR) 74:53:01:01) [Citation Revised April 1998].
- *Absorption Field* - the soil or soils through which wastewater from an absorption system percolates (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Absorption Line* - a perforated or open-jointed pipe that is installed in a covered trench or bed for the purpose of distributing wastewater to the surrounding soils through the perforations or the spaces between sections of the pipe (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Absorption System* - a system that utilizes absorption lines in trenches or beds to distribute waste-water to adjacent soils in an absorption field (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Absorption Trench* - a long, narrow excavation made in soil for the placement of an absorption line (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Adequate Wastewater Treatment* - the dispersal of wastewater in a manner which does not cause pollution of ground or surface waters or creates a public health problem or odors (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Administrator* - the administrator of the U.S. Environmental Protection Agency (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Aerobic Wastewater Treatment System* - a method of treatment utilizing the principle of oxidation in the biological decomposition of wastewater by either introducing air into the wastewater or allowing surface absorption of air into the wastewater (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Affected Community* - the aquatic community where water quality will be improved or degraded (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Alternative Water-Carriage System* - an onsite wastewater treatment system, other than a conventional septic tank and absorption system, designed to provide adequate wastewater treatment (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Ambient* - the constituents or parameters and the concentration or measurements which describe water quality prior to a subsurface discharge (SDAR 74:53:01:01) [Citation Revised April 1998].

- *Ammonia Toxicity* - “Ammonia Toxicity” by William T. Willingham, Control Technology Branch, Water Division, U.S. Environmental Protection Agency, Region VIII (February 1976) (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Aquatic Community* - an association of interacting stages of aquatic life in a given water body or habitat (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Aquatic Life* - an organism dependent on the water environment to either propagate or survive, or both (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Aquifer* - a geologic formation, group of geologic formations, or part of a geologic formation that contains sufficient saturated permeable material to yield economical quantities of waters and springs (SDAR 74:54:02:01) [Citation Revised April 1998].
- AWWA - American Water Works Association (SDAR 74:53:01:01) [Citation Revised January 2007].
- *Attainable Beneficial Uses* - those beneficial uses which, at a minimum, can be achieved by the imposition of effluent limits required under 74:03:02:17 to 74:03:02:26, inclusive, and cost-effective and reasonable best management practices for nonpoint source control (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Best Management Practices (BMPs)* - schedules of activities, prohibitions of practice, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge, waste disposal, or drainage from raw material storage (SDAR 74:51:01:01) [Citation Revised April 1998; Revised March 2003].
- *Bioaccumulative Pollutants* - those pollutants which are taken up, retained, or accumulated in the bodies of organisms and are transferred by ingestion in increasing concentrations in the predator organisms to the point that one or more organisms in the food chain suffer significant harm (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Bioassay* - a procedure in which the responses of organisms are used to detect or measure the presence or effect of one or more substances, wastes, effluents, or environmental factors, alone or in combination (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Biochemical Oxygen Demand, BOD* - a standardized laboratory test used to determine the relative oxygen requirements of waters and wastewaters (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Biological Decomposition Toilet* - a toilet for human excreta which treats waste biologically through a process of aerobic decomposition (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Biological Integrity* - the ability to support and maintain a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Board* - the South Dakota Board of Water Management (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Building or Facility Sewer* - that part of a drainage system extending from a building or facility which conveys wastes discharged from the building or facility to a public or individual wastewater treatment system (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Cesspool* - a covered underground receptacle that receives untreated domestic wastewater and permits the untreated domestic wastewater to seep into the surrounding soils (SDAR 74:53:01:01) [Citation Revised April 1998].

- *Chemical Toilet* - a toilet constructed to accept and discharge human excreta into a deodorizing and liquefying chemical solution contained in a watertight tank without the use of water as a transport medium (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Cistern* - a watertight underground receptacle of nontoxic material designed for the storage of potable water (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Coldwater Aquatic Life (Animals)* - aquatic life including fish of the family *Salmonidae*, for example, trout and salmon (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Coldwater Marginal Fish Life Propagation* - a beneficial use assigned to surface waters of the state which support aquatic life and are suitable for stocked catchable-size coldwater fish during portions of the year, but which, because of critical natural conditions including low flows, siltation, or warm temperatures, are not suitable for a permanent coldwater fish population. Warmwater fish may also be present (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Coldwater Permanent Fish Life Propagation* - a beneficial use assigned to surface waters of the state which are capable of supporting aquatic life and is suitable for supporting a permanent population of coldwater fish from natural reproduction or fingerling stocking. Warmwater fish may also be present (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Commerce and Industry* - a beneficial use assigned to surface waters of the state which are suitable for use as cooling water, industrial process water, navigation, and production of hydroelectric power (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Compliance Monitoring Point* - a well or wells located at the appropriate edge of the perimeter of operational pollution which is determined to be the earliest point of detection of a violation of a groundwater discharge plan (SDAR 74:54:02:01) [Citation Revised April 1998].
- *Concentrated Aquatic Animal Production Facility* - a hatchery, fish farm, or other facility which meets the criteria and designation below (SDAR 74:52:02:35) [Citation Revised April 1998]:
 1. if it contains, grows, or holds aquatic animals in either of the following categories:
 - a. cold water fish species or other cold water aquatic animals, in ponds, raceways, or similar structures which discharge at least 30 days a year but not facilities which produce less than 9090 harvest weight kilograms (20,000 lb) of aquatic animals a year and facilities which feed less than 2272 kg (approximately 5000 lb) of food during the calendar month of maximum feeding
 - b. warm water fish species or other warm water aquatic animals, in ponds, raceways, or similar structures which discharges at least 30 days a year, but not closed ponds which discharge only during periods of excess runoff or facilities which produce less than 45,454 harvest weight kilograms (approximately 100,000 lb) of aquatic animals a year.

(NOTE: The Secretary may designate any warm or cold water aquatic animal production facility as a concentrated aquatic animal production facility upon determining that it is a significant contributor of pollution to the surface waters of the state considering the following:

 - location and quality of the receiving waters of the state
 - holding, feeding, and production capacities of the facility
 - quantity and nature of the pollutants reaching surface waters of the state
 - other relevant factors.)
- *Conventional Individual Onsite Wastewater System* - an individual onsite wastewater system composed of a septic tank followed by an absorption system (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Criterion* - a designated concentration of a substance, measure of a physical factor, or narrative statement that, when not exceeded, will protect an organism, a biological community, or a prescribed beneficial use or water quality (SDAR 74:51:01:01) [Citation Revised April 1998].

- *Department* - the South Dakota Department of Environment and Natural Resources (SDAR 74:53:01:01) [Citation Revised April 1998; Revised March 2003].
- *Designated Beneficial Uses* - those beneficial uses specified in chapters 74:03:03 and 74:03:04 for each water body or segment whether or not they are being attained (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Direct Responsible Charge* - in smaller facilities where shift operation is not required, the person who is responsible and in active charge of the water treatment or wastewater treatment plant's or system's performance and operation. In larger facilities where shift operation is required, "direct responsible charge" means both active daily on-site technical direction and supervision and active daily on-site charge of an operating shift or a major segment of a system or facility. In facilities where shift operation is required, "direct responsible charge" is that person designated by the entity or municipality to serve as a supervisor for one on-site shift operation of a system or facility (SDAR 74:21:02:35) [Added February 2001; Citation Revised February 2007].
- *Dispersal System* - a system for the distribution of effluent by such methods as transpiration, evapotranspiration, or soil absorption (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Distribution Box* - a watertight chamber below the outlet level of a septic tank or pretreatment unit from which effluent is distributed evenly to various portions of an absorption system (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Domestic Wastewater, Domestic Sewage* - waste, other than industrial wastes, derived from premises such as houses, trailer courts, commercial buildings, and institutions (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Domestic Water Supply* - a beneficial use assigned to surface waters of the state which are suitable for human consumption, culinary or food processing purposes, and other household purposes after suitable conventional treatment (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Dosing Chamber* - a tank that stores pretreated wastewater for periodic pressurized discharges to mounds or absorption fields (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Effluent* - the partially or completely treated liquid waste discharge from a wastewater treatment system (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Eight-Hour Composited Sample* - a sample composed of eight grab samples taken at one-hour intervals, the volume of each sample proportioned to flow, and physically mixed prior to analysis (SDAR 74:51:01:01) [Citation Revised April 1998].
- *EPA Methods* - Methods for Chemical Analysis of Waters and Wastes, 1983, Environmental Protection Agency, Analytical Quality Control Laboratory (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Existing Beneficial Uses* - those beneficial uses that were attained before 28 March 1973, whether or not they are so designated (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Evapotranspiration System* - an imperviously lined dispersal system that uses a process of evaporation and plant transpiration to withdraw water from the soil (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Geometric Mean* - the nth root of a product of n factors (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Gradient* - the change in total head per unit of distance (SDAR 74:54:02:01) [Citation Revised April 1998].
- *Graywater* - the wastewater generated by water-using fixtures and appliances which do not discharge garbage or urinary or fecal wastes (SDAR 74:53:01:01) [Citation Revised April 1998].

- *Graywater System* - a wastewater system designed to recycle or treat wastes from sinks, lavatories, tubs, showers, washers, or other devices which do not discharge garbage or urinary or fecal wastes (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Grease Interceptor* - an outdoor unit similar to a septic tank, used to remove excessive amounts of grease and oils, by flotation, that may interfere with subsequent treatment of the waste (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Groundwater* - water below the land surface that is in the zone of saturation (SDAR 74:54:02:01) [Citation Revised April 1998].
- *Groundwater Table* - the upper surface of a groundwater aquifer in the zone of saturation of a geologic formation (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Handbook 69* - Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure, recommendations of the National Committee on Radiation Protection, National Bureau of Standards Handbook 69, (August 1963) (SDAR 74:51:01:01) [Citation Revised April 1998].
- *High-Quality Fishery Waters* - surface waters of the state designated for the beneficial use of coldwater permanent fish life propagation, coldwater marginal fish life propagation, or warmwater permanent fish life propagation (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Holding Tank* - a watertight, covered receptacle that is designed to receive and store the discharge of domestic wastewater and is accessible for periodic removal of its contents (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Immersion Recreation* - a beneficial use assigned to surface waters of the state which are suitable for uses where the human body may come in direct contact with the water, to the point of complete submersion and where water may be accidentally ingested or where certain sensitive organs such as the eyes, ears, and nose may be exposed to water (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Impact* - a man-induced change in the chemical, physical, or biological quality or condition of surface waters of the state (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Impairment* - a detrimental effect on the aquatic community caused by an impact that prevents attainment of the designated use (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Incinerator Toilet* - a waste disposal system which uses natural gas, propane, or electricity to incinerate wastes (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Individual Onsite Wastewater System* - a system or facility for treating, neutralizing, stabilizing, or dispersing wastes from one source (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Invert Elevation* - the lowest portion of the inside of any horizontal pipe (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Irrigation* - a beneficial use assigned to surface waters of the state which are suitable for irrigating farm lands, ranch lands, gardens, and recreational areas (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Lake* - a pond, reservoir, or other body of water, created by either natural or artificial means, but not a pond or appurtenance that is used for the treatment and disposal of wastes and that is permitted for such uses (SDAR 74:51:01:01) [Citation Revised April 1998].

- *Lethal Concentration* - the concentration of a toxicant producing death of a test organism in a given period of time (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Limited-Contact Recreation* - a beneficial use assigned to surface waters of the state which are suitable for boating, fishing, and other water-related recreation other than immersion recreation where a person's water contact would be limited to the extent that infections of eyes, ears, respiratory or digestive systems, or urogenital areas would normally be avoided (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Manure Management System* - any piping, containment structures, or disposal appurtenances associated with the collection, storage, treatment, and disposal of manure or wastewater at a concentrated animal feeding operation (SDAR 74:57:01:01) [Added February 1999].
- *Mechanical Wastewater Treatment Plants* - aerobic systems and package treatment plants (SDAR 74:53:01:01) [Citation Revised April 1998].
- *MF* - membrane filter used to signify that the number of bacteria was determined by means of the membrane filter technique (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Mottling* - the spots or blotches of a different color or shades of color interspersed with the dominant color of the soil that usually indicate that the soil is seasonally saturated (SDAR 74:53:01:01) [Citation Revised April 1998].
- *MPN* - most probable number. a term used to signify that the number of bacteria was determined by means of the multiple-tube fermentation technique (SDAR 74:51:01:01) [Citation Revised April 1998].
- *No Dak System, Mound System* - a shallow wastewater dispersal system constructed partially above ground which uses plant transpiration and soil absorption for final treatment of wastes (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Nonpoint Source* - a source of pollution that is not defined as a point source (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Onsite Wastewater System* - a system designed to contain, distribute, or treat wastewater on or near the location where the wastewater is generated, including sewers, septic tanks, absorption fields, No dak systems, seepage pits, vault privies, holding tanks, subsurface sand filters, graywater systems, pumping stations, dosing chambers, and related equipment (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Owner and Operator* - person legally responsible for a facility subject to the provisions of this chapter (SDAR 74:54:02:01) [Citation Revised April 1998].
- *Package Treatment Plants* - small or scaled-down versions of municipal wastewater treatment works which are generally assembled and shipped as complete mechanical units by the manufacturer (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Parameter* - a chemical, physical, or biological characteristic which affects the use of surface waters of the state (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Percolation Test* - a soil test at the depth of a proposed absorption system to determine the water absorption capability of the soil, the results of which are normally expressed as the rate at which 1 in. of water is absorbed over an interval of time (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Permitted Allowable Limit* - the maximum groundwater contaminant concentration allowed at the compliance monitoring point as specified in the groundwater discharge permit (SDAR 74:54:02:01) [Citation Revised April 1998].

- *Pit Privy* - a structure which allows for disposal of human excreta into a pit in the soil where a portion of the waste is dispersed by seepage into the surrounding soil (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Point of Application* - the outermost limit at which effluent or leachate has been stored, applied, disposed of, or discharged. For a diked facility, the outermost edge of the dikes (SDAR 74:54:02:01) [Citation Revised April 1998].
- *Point Source* - a discernible, confined, and discrete conveyance, including a pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, animal feeding operation, or vessel or other flowing craft, from which pollutants are or may be discharged (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Pollutant* - dredged spoil, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, munitions, chemical waste, biological material, radioactive material, heat, wrecked or, discarded equipment, rock, sand, or cellar dirt or any industrial, municipal, or agricultural waste discharged into waters of the state, but not sewage from water craft, water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well if the well used either to facilitate production or for disposal purposes is approved by authority of the state after it is determined that such injection or disposal will not result in the degradation of ground or surface resources (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Pollutant* - dredged spoil, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, chemical waste, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, or any industrial, municipal, or agricultural waste discharged into waters of the state (SDAR 74:54:02:01) [Citation Revised April 1998].
- *Pollution* - contamination or other alteration of the physical, chemical, or biological properties of any waters of the state that exceeds that permitted by state effluent or water quality standards, including change in temperature, taste, color, turbidity, or odor of the waters, or the discharge of a liquid, gaseous, solid, radioactive, or other substance into any waters of the state that will or is likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, safety, or welfare, to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish, or other aquatic life (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Potable Water* - waste that does not contain objectionable pollution, contamination, minerals, or infective agents and is considered satisfactory for domestic consumption (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Private Water System* - a water supply system that provides water for human consumption to fewer than 15 service connections, that regularly serves fewer than 25 individuals, or that serves 25 or more individuals for no more than 60 days per year (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Public Wastewater System* - a facility for the treatment of wastewater owned by the state or any of its political subdivisions (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Public Water System* - a water supply system that provides water for human consumption to 15 or more service connections or that serves an average of 25 or more individuals for 60 or more days per year (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Radius of Influence* - the radial distance from the center of a well bore to the point where there is no lowering of the water table or potentiometric surface because of pumping of the well, the edge of the cone of depression (SDAR 74:54:02:01) [Citation Revised April 1998].
- *Receptacle* - a tank, basin, cistern, grease interceptor, or reservoir for the containment of water or wastes or both (SDAR 74:53:01:01) [Citation Revised April 1998].

- *Sand* - a soil texture composed by weight of at least 25 percent of very coarse, coarse, and medium sand varying in size from 2.0 to 0.25 mm, less than 50 percent of fine or very fine sand varying in size from 0.25 to 0.05 mm, and no more than 10 percent of particles smaller than 0.05 mm (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Seasonal High Groundwater Table* - the highest elevation or level to which a soil is saturated for a week or more as observed as a free water surface in an unlined hole or to which it has been previously saturated as indicated by mottling, whichever is higher (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Secretary* - the Secretary of Environment and Natural Resources or a representative designated to act for him/her (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Secretary* - the secretary of the South Dakota Department of Environment and Natural Resources, or an authorized representative (SDAR 74:57:01:01) [Added February 1999].
- *Sedimentation Tank* - a watertight basin or tank in which liquid waste containing settleable solids and suspended matter are retained for removal by gravity (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Seepage Pit* - a subsurface absorption device which consists of a covered excavation no deeper than 4 ft with open-jointed walls through which effluent, after primary treatment, may seep or leach into the surrounding soil (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Segment* - a continuous stretch of water found between two points in the bed of a stream (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Septic Tank* - a watertight, accessible, covered receptacle which receives domestic wastewater from a building or facility sewer, allows solids to settle from the liquid, provides digestion for organic solids, stores digested solids through a period of retention, and allows clarified liquid to discharge to additional treatment works for final treatment and dispersal (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Serial Distribution* - an arrangement of absorption trenches or beds which retains effluent in each component so as to utilize the total effective absorption area of each component before allowing the effluent to flow into a succeeding component (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Shallow Wastewater System* - a type of absorption system that relies primarily upon evapotranspiration rather than percolation for final treatment of wastes (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Small Municipal Separate Storm Sewer System* - separate storm sewer system that is: owned or operated by a federal, state, city, town, county, association, district, sanitary district, or other public body with jurisdiction over the disposal of sewage, industrial wastes, or other wastes; and is located in an incorporated place which serves a population of less than 100,000 or that is located in one or more counties with unincorporated urbanized populations serving less than 100,000. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings. Population served is determined by the 2000 census by the Bureau of Census (SDAR 74:52:01:01) [Added March 2003].
- *Small Onsite Wastewater System* - a system or device for the collection, storage, treatment, neutralization, stabilization, and dispersal of wastewater from dwellings or other facilities which serve 30 or fewer individuals or produce 7500 gal or less of wastewater per day (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Soil Horizon* - a layer of soil or soil material approximately parallel to the land surface and differing from adjacent genetically related layers in physical, chemical, and biological properties or characteristics such as color, structure, texture, consistency, and pH (SDAR 74:53:01:01) [Citation Revised April 1998].

- *Spawning Bed* - a place where fish spawn (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Stabilization Pond* - a diked basin which retains wastewater for evaporation or final treatment before discharge of liquid effluent (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Standard Methods* - Standard Methods for the Examination of Water and Wastewater, Seventeenth edition, American Public Health Association, et al., (1989) (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Stream* - a river, creek, tributary, or other watercourse (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Suitable Soil* - a soil which acts as an effective filter in the removal of organisms and suspended solids before the effluent reaches any highly permeable earth formations such as joints in bedrock, gravels, or very coarse soils (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Surface Water of the State* - lakes, ponds, streams, rivers, wetlands, and any other body or accumulation of water on the land surface that is considered to be waters of the state, but not waste treatment systems, including treatment ponds, lagoons, leachate collection ponds, or stormwater retention ponds designed to meet the requirements of the CWA other than cooling ponds as defined in 40 CFR 423.11(m) (1 July 1991) (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Thirty-Day Average* - the arithmetic mean of a minimum of 3 consecutive samples taken on separate weeks in a 30-day period (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Toxic Pollutant* - a pollutant or combination of pollutants, including disease-causing agents, which, upon exposure, ingestion, inhalation, or assimilation into an organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available, cause death, disease, behavioral abnormality, cancer, genetic mutation, physiological malfunctions including reproductive malfunction, or physical deformity, in an organism or its offspring (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Twenty-Four-Hour Composited Sample* - a sample composed of 24 grab samples taken at 1-h intervals, the volume of each sample proportioned to flow, and physically mixed prior to analysis (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Unconventional System* - a system or device, such as a compost unit, vault privy, or chemical toilet, which receives and treats human excrete without the use of water as a transport medium (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Underground Dispersal* - a subsurface infiltration system for the absorption of wastewater by adjacent soils and vegetation (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Vadose Zone* - the zone containing water under pressure less than that of the atmosphere, including soil water, intermediate vadose water, and capillary water, limited above by the land surface and below by the surface of the zone of saturation or the water table (SDAR 74:54:02:01) [Citation Revised April 1998].
- *Vault Privy* - a structure which allows for disposal of human excreta into a watertight vault, provides privacy and shelter, and prevents access to the excreta by files, rodents, and other animals (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Warmwater Aquatic Life* - aquatic life including the *Ameiuridae*, *Centrachidae*, and *Cyprinidae* families of fish, for example, catfish, sunfish, and minnows, respectively (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Warmwater Marginal Fish Life Propagation* - a beneficial use assigned to surface waters of the state which will support aquatic life and more tolerant species of warmwater fish naturally or by frequent stocking and intensive

management but which suffer frequent fish kills because of critical natural conditions (SDAR 74:51:01:01) [Citation Revised April 1998].

- *Warmwater Permanent Fish Life Propagation* - a beneficial use assigned to surface waters of the state which support aquatic life and are suitable for the permanent propagation or maintenance, or both, of warmwater fish (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Warmwater Semipermanent Fish Life Propagation Waters* - a beneficial use assigned to surface waters of the state which support aquatic life and are suitable for the propagation or maintenance, or both, of warmwater fish but which may suffer occasional fish kills because of critical natural conditions (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Water-Carriage Wastewater System* - a system which transports wastes from buildings or other facilities hydraulically by the use of water in a piping system (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Water Supply System* - a system of pipes and other structures through which water is obtained and distributed for consumption from springs, wells and well structures, intakes and cribs, pumping stations, treatment plants, reservoirs, storage tanks, cisterns, and related appurtenances (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Waters of the State* - all waters within the jurisdiction of this state, including streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, situated wholly or partly within or bordering on the state, but not waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA other than cooling ponds as defined in 40 C.F.R. 423.11(m) (1 July 1991) (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Well* - an artificial excavation or opening in the ground made by digging, boring, drilling, jetting, or another artificial method often walled or cased to prevent the sides from caving in, whose depth is greater than the largest surface dimension (SDAR 74:54:02:01) [Citation Revised April 1998].
- *Wetlands* - those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions including swamps, marshes, bogs, and similar areas (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Wildlife Propagation and Stock Watering* - a beneficial use assigned to surface waters of the state which are satisfactory as habitat for aquatic and semi-aquatic wild animals and fowl, provide natural food chain maintenance, and are of suitable quality for watering domestic and wild animals (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Zone of Mixing* - an area in a stream where an effluent or discharge mixes with the upstream water (SDAR 74:51:01:01) [Citation Revised April 1998].

**WASTEWATER MANAGEMENT
GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS**

REFER TO CHECKLIST ITEMS:

Missing Checklist Items	WA.2.1.SD.
Discharges to the Environment	WA.5.1.SD. through WA.5.9.SD.
Permits	WA.10.1.SD. through WA.10.11.SD.
State Permits	WA.15.1.SD. through WA.15.17.SD.
Treatment Works	WA.20.1.SD. through WA.20.8.SD.
Limitations for Mixing Zones	WA.90.1.SD.
Other Discharges and Dischargers	WA.95.1.SD.
Sewage Systems	WA.100.1.SD. through WA.100.31.SD.

GUIDANCE FOR APPENDIX USERS

REFER TO APPENDIX NUMBERS: REFER TO APPENDIX TITLES:

12-1	[Deleted February 2010]
12-2	Distance Between Onsite Wastewater System Components and Pertinent Ground Features
12-3	Wastewater Flow Capacity Requirements
12-4	Absorption Area
12-5	Required Bottom Area of Beds for Mound and Evapotranspiration Systems

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.2.</p> <p>MISSING CHECKLIST ITEMS</p> <p>WA.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
WA.5. DISCHARGES TO THE ENVIRONMENT <p>WA.5.1.SD. Facilities must not discharge pollutants into surface waters that would cause the waters to be unsuitable for their designated beneficial uses (SDAR 74:51:01:02 through 74:51:01:04) [Citation Revised April 1998; Revised February 2000].</p>	Verify that pollutants are not being discharged into surface waters that would cause them to be unsuitable for their existing or designated beneficial uses. Verify that, for surface water with dual classifications, the more restrictive criterion for parameter common to both classifications (such as coliform organisms or pH) is met. (NOTE: For waters that flow into another segment with more stringent parameter criterion, even if the discharged pollutants are meeting the criteria for the water segment into which they are originally being discharged, the more stringent criterion must be met.)
<p>WA.5.2.SD. Wastes with materials that can cause pollutants to form may not be discharged into surface waters (SDAR 74:51:01:05) [Citation Revised April 1998; Revised February 2000].</p>	Verify that interaction of materials in the discharged waste and the receiving waters are not creating a pollutant that violates the criterion for the waters' existing or designated beneficial use or impairs the aquatic community as it naturally occurs.
<p>WA.5.3.SD. The discharge of visible pollutants is prohibited (SDAR 74:51:01:13) [Citation Revised April 1998].</p>	Verify than none of the following are being discharged into surface waters which produce floating solids, scum, oil slicks, material discoloration, visible gassing, sludge deposits, sediments, slimes, algal blooms, fungus growths, or other offensive effects: <ul style="list-style-type: none"> - raw or treated sewage - garbage - rubble - unpermitted fill materials - municipal wastes - industrial waste - agricultural wastes.
<p>WA.5.4.SD. Materials affecting the pH of the receiving waters must be limited (SDAR 74:51:01:07)</p>	Verify that no materials are discharged which affects the pH of the receiving waters by more than 0.5 pH unit. (NOTE: This does not apply to pH fluctuations of more than 0.5 pH unit)

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
[Citation Revised April 1998].	attributable to natural influences.)
WA.5.5.SD. The discharge of taste- and odor-producing materials is limited (SDAR 74:51:01:08) [Citation Revised April 1998].	Verify that materials that will impart undesirable tastes or undesirable odors to the receiving water are not discharged in concentrations that impair a beneficial use.
WA.5.6.SD. The discharge of materials producing nuisance aquatic life are limited (SDAR 74:51:01:09) [Citation Revised April 1998].	Verify that materials that produce nuisance aquatic life are not being discharged into surface waters in concentrations that impair a beneficial use or create a human health problem.
WA.5.7.SD. The discharge of insoluble materials of petroleum derivation is restricted (SDAR 74:51:01:10) [Citation Revised April 1998].	Verify that no discharges of insoluble materials of petroleum derivation that impart a visible film or sheen to the surface of the water or the adjoining shoreline are made.
WA.5.8.SD. [Deleted February 2010].	(NOTE: See WQ.115.6.SD. for the requirements found in SDAR 74:51:01:41.)
WA.5.9.SD. [Deleted February 2010].	(NOTE: SDAR 74:51:01:38 indicates that nonpoint source discharges will be reviewed for feasibility and shall be controlled utilizing cost-effective methods and reasonable best management practices.)

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.10.</p> <p>NPDES PERMITS</p> <p>WA.10.1.SD. [Deleted February 2010].</p> <p>WA.10.2.SD. Facilities discharging pollutants from any point source into surface waters must have a permit (SDAR 74:52:01:04 through 74:52:01:06 and 74:52:02:36) [Citation Revised April 1998; Revised March 2003; Added February 2010].</p>	<p>(NOTE: See WA.10.2.SD.)</p> <p>(NOTE: Moved from WA.15.1.SD.)</p> <p>Determine whether the facility has any of the following point source discharges that require an SWD permit:</p> <ul style="list-style-type: none"> - concentrated animal feeding operations - concentrated aquatic animal production facilities - discharges into aquaculture projects - silviculture point sources - publicly owned treatment works - industrial discharges - privately owned treatment works - Federal facilities, except those located on Indian reservations - other point sources as determined by the Secretary. <p>Determine whether the facility has any of the following stormwater discharges that require an SWD permit:</p> <ul style="list-style-type: none"> - associated with industrial activity - from a large or medium municipal separate storm sewer system - from a small municipal separate storm sewer system located in an urbanized area as determined by the 2000 census by the Bureau of Census - from a small municipal separate storm sewer system serving a population greater than or equal to 10,000 persons - associated with small construction activity - which the Secretary determines to contribute to a violation of a water quality standard, to be a significant contributor of pollutants to the waters of the state, or to have the potential to contribute significant pollutants to waters of the state. <p>Verify that facilities do not directly discharge pollutants from any point source into surface waters of the state without a valid SWD permit.</p> <p>(NOTE: The following discharges do not require an SWD permit:</p> <ul style="list-style-type: none"> - a discharge in compliance with the instructions of an on scene coordinator pursuant to 40 CFR 300 or 33 CFR.153.10(e) - the introduction of pollutants from nonpoint source agriculture activities, including runoff from orchards, cultivated crops, pastures, range lands, and forest lands

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<ul style="list-style-type: none"> - return flows from irrigated agriculture - discharges of dredged or fill materials into waters of the United States which are regulated under Section 404 of the <i>Clean Water Act</i> (CWA) - storm water runoff from oil and gas exploration, production, processing or treatment operations or transmission facilities, composed entirely of flows which are from conveyances, including pipes, conduits, ditches, and channels, used for collecting and conveying precipitation runoff and which does not come into contact with any overburden, raw material, intermediate products, finished products, by-products, or waste products located on the site of such operations - storm water runoff from industrial facilities that have completed and submitted a certification statement in accordance with 40 CFR 122.26(g) identifying the facility to have no exposure to storm water runoff - storm water runoff from a small municipal separate storm sewer system that serves a population of less than 1,000 persons within an urbanized area as determined by the 2000 census by the Bureau of Census - the introduction of sewage, industrial wastes, or other pollutants into publicly owned treatment works by indirect discharges.) <p>(NOTE: The final exclusion does not apply to the introduction of pollutants to privately owned treatment works or to other discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other party not leading to treatment works.)</p>
WA.10.3.SD. Facilities that do not have permits for discharges or proposed discharges must apply to the Secretary for a permit (SDAR 74:52:02:01 and 74:52:02:03) [Citation Revised April 1998; Added February 2010].	<p>(NOTE: Moved from WA.15.2.SD.)</p> <p>Verify that any facility that discharges or proposes to discharge pollutants to surface waters of the state and does not have an effective SWD permit submits a complete, signed application for an SWD permit to the Secretary.</p> <p>(NOTE: The following are exceptions to the application requirements:</p> <ul style="list-style-type: none"> - persons covered by general permits - discharges excluded under SDAR 74:03:17:03.01 (see WA.15.1.SD. above) - users of a privately owned treatment works.) <p>(NOTE: When a facility or activity is owned by one person but is operated by another person, the operator must obtain the permit.)</p> <p>Verify that facilities proposing a surface water discharge submit a complete application for an SWD permit at least 180 days before the date on which the discharge is to commence unless permission for a later date has been granted by the Secretary.</p>
WA.10.4.SD. Facilities with discharges must have plans	<p>(NOTE: Moved from WA.15.3.SD.)</p>

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>and specifications approved by the Secretary (SDAR 74:52:01:07) [Citation Revised April 1998; Citation Revised February 2007; Added February 2010; Added February 2010].</p> <p>WA.10.5.SD. Facilities with SWD permits must reapply before expiration (SDAR 74:03:18:06 and 74:52:02:06) [Citation Revised April 1998; Added February 2010].</p> <p>WA.10.6.SD. Facilities must maintain records of all monitoring information (SDAR 74:52:03:04) [Citation Revised April 1998; Added February 2010].</p> <p>WA.10.7.SD. Facilities must report changes in operations (SDAR 74:52:03:05) [Citation Revised April 1998; Added</p>	<p>Verify that plans and specifications are approved by the Secretary if the following activities result in a discharge:</p> <ul style="list-style-type: none"> - the construction, installation, modification, or operation of a disposal system or part of a disposal system - the increase in volume or strength of wastes in excess of the limit specified in an existing SWD permit - the construction or use of a new outlet for the discharge of water into waters of the state. <p>(NOTE: Moved from WA.15.4.SD.)</p> <p>Verify that the facility reapplies for an SWD permit at least 180 days before the expiration of the existing permit.</p> <p>(NOTE: The conditions of an expired permit remain effective and enforceable until the effective date of a new permit if the facility submitted a complete and timely application and the Secretary, through no fault of the facility, does not issue a new permit that is effective by the expiration date of the previous permit.)</p> <p>(NOTE: Moved from WA.15.5.SD.)</p> <p>Verify that facilities maintain records of all monitoring information for at least 3 yr from the date of the sample, measurement, report, or application, including:</p> <ul style="list-style-type: none"> - all calibration and maintenance records - all original strip chart recordings and continuous monitoring instrumentation - copies of all reports required by the permit - records of all data used to complete the application for the permit. <p>Verify that records of monitoring information include the following:</p> <ul style="list-style-type: none"> - date, exact place, and time of sampling or measurement - individuals who performed the sampling or measurements - dates analyses were performed - individuals who performed the analyses - analytical techniques or methods used - results of the analyses. <p>(NOTE: Moved from WA.15.6.SD.)</p> <p>Verify that the facility reports the following changes to the Secretary:</p> <ul style="list-style-type: none"> - any planned physical alteration or additions to the permitted facility that

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>February 2010].</p> <p>WA.10.8.SD. Facilities must comply with monitoring requirements (SDAR 74:52:03:06) [Citation Revised April 1998; Added February 2010].</p>	<p>could significantly change the nature or increase the quantity of any pollutants discharged (when meeting the definition of new source, new discharger, alteration, or addition) as soon as possible</p> <ul style="list-style-type: none"> - any planned changes in the permitted facility or activity which may result in noncompliance with the permit requirements in advance - if the permit is to be transferred to another person. <p>(NOTE: Moved from WA.15.7.SD.)</p> <p>Verify that monitoring results are reported at the intervals specified in the permit on a discharge monitoring report (DMR).</p> <p>(NOTE: If the facility monitors any pollutant more frequently than required in the permit, using test procedures approved in 40 CFR 136, the results of the monitoring must be included in the calculation and reporting of the data submitted in the DMR.)</p> <p>Verify that calculations for all limitations that require the average of several measurements use an arithmetic mean unless otherwise specified by the Secretary in the permit.</p> <p>Verify that samples and measurements taken for the purpose of monitoring are representative of the monitored activity.</p> <p>Verify that monitoring is conducted according to test procedures approved in 40 CFR 136 unless other test procedures are specified in the permit.</p>
<p>WA.10.9.SD. Facilities must report compliance and noncompliance (SDAR 74:52:03:07) [Citation Revised April 1998; Added February 2010].</p>	<p>(NOTE: Moved from WA.15.8.SD.)</p> <p>Verify that the facility reports any noncompliance which may endanger public health or the environment to the Secretary within 24 h from the time the facility becomes aware of the circumstances which includes:</p> <ul style="list-style-type: none"> - an unanticipated bypass which exceeds an effluent limitation in the permit - an upset which exceeds an effluent limitation in the permit - violation of a maximum daily discharge limitation for any of the pollutants listed by the Secretary in the permit. <p>Verify that a written report is provided to the Secretary within 5 days after the time the facility becomes aware of the circumstances containing the following:</p> <ul style="list-style-type: none"> - a description of the noncompliance and its cause - the period of noncompliance, including exact dates and times - if noncompliance has not been corrected, the anticipated time it is expected to continue - steps taken or planned to reduce, eliminate, and prevent reoccurrence of the

<p style="text-align: center;">COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT</p> <p style="text-align: center;">South Dakota Supplement</p>	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.10.10.SD. Facilities with an anticipated bypass must have Secretary approval (SDAR 74:52:03:08) [Citation Revised April 1998; Added February 2010].</p>	<p>noncompliance.</p> <p>(NOTE: The Secretary may waive the written report on a case-by-case basis for reports listed in this checklist item if the oral report has been received within 24 h.)</p> <p>(NOTE: The facility must report all instances of noncompliance not reported above at the time monitoring reports are submitted with information as required in this checklist item.)</p> <p>(NOTE: Moved from WA.15.9.SD.)</p> <p>Determine whether the facility has had any anticipated bypasses that caused the effluent limitations to be exceeded.</p> <p>Verify that any anticipated bypasses were approved by the Secretary after considering adverse effects and determining that it met the following conditions:</p> <ul style="list-style-type: none"> - the bypass was unavoidable to prevent loss of life, threat to public health, personal injury, or severe property damage - the facility notified the Secretary at least 10 days before the anticipated bypass - there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of the untreated wastes, or maintenance during normal periods of equipment downtime (NOTE: This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance). <p>(NOTE: An anticipated bypass, which causes the effluent limitations to be exceeded, is prohibited, and the Secretary may take enforcement action against the facility unless the above conditions were met.)</p>
<p>WA.10.11.SD. Unanticipated bypasses must be reported to the Secretary (SDAR 74:52:03:09) [Citation Revised April 1998; Added February 2010].</p>	<p>(NOTE: Moved from WA.15.10.SD.)</p> <p>Verify that unanticipated bypasses are reported to the Secretary as soon as possible, but no later than 24 h after the facility first becomes aware of the circumstances.</p> <p>Verify that a written report is provided within 5 days after the facility becomes aware of the unanticipated bypass which includes:</p> <ul style="list-style-type: none"> - a description of the bypass and its cause - the period of bypass, including exact dates and times - the estimated time the bypass is expected to continue if it has not been

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>corrected</p> <p>- steps taken or planned to reduce, eliminate, and prevent recurrence of a bypass.</p> <p>(NOTE: The Secretary may waive the written report on a case-by-case basis if the oral report was received within 24 h.)</p>

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
WA.15. STATE PERMITS	
WA.15.1.SD. [Moved February 2010].	[Moved] (NOTE: SDAR 74:52:01:04 through 74:52:01:06 and 74:52:02:36 moved to WA.10.2.SD.)
WA.15.2.SD. [Moved February 2010].	[Moved] (NOTE: SDAR 74:52:02:01 and 74:52:02:03 moved to WA.10.3.SD.)
WA.15.3.SD. [Moved February 2010].	[Moved] (NOTE: SDAR 74:52:01:07 moved to WA.10.4.SD.)
WA.15.4.SD. [Moved February 2010].	[Moved] (NOTE: SDAR 74:03:18:06 and 74:52:02:06 moved to WA.10.5.SD.)
WA.15.5.SD. [Moved February 2010].	[Moved] (NOTE: SDAR 74:52:03:04 moved to WA.10.6.SD.)
WA.15.6.SD. [Moved February 2010].	[Moved] (NOTE: SDAR 74:52:03:05 moved to WA.10.7.SD.)
WA.15.7.SD. [Moved February 2010].	[Moved] (NOTE: SDAR 74:52:03:06 moved to WA.10.8.SD.)
WA.15.8.SD. [Moved February 2010].	[Moved] (NOTE: SDAR 74:52:03:07 moved to WA.10.9.SD.)
WA.15.9.SD. [Moved February 2010].	[Moved] (NOTE: SDAR 74:52:03:08 moved to WA.10.10.SD.)

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
WA.15.10.SD. [Moved February 2010].	(NOTE: SDAR 74:52:03:09 moved to WA.10.11.SD.)
WA.15.11.SD. Discharges of waste or pollutants to groundwater must be permitted (SDAR 74:54:02:02, 74:54:02:04 and 74:54:02:05) [Citation Revised April 1998; Revised March 2005].	<p>Verify that facilities with new discharges of waste or pollutants that may move directly or indirectly into groundwater, including land application of wastes, waste storage pits, waste storage piles, landfills and dumps, feedlots, mining and milling operations, and concentrated animal feeding operations, apply to the Secretary for an approved groundwater discharge plan at least 180 days before any discharge.</p> <p>Verify that the owner and operator of a discharge facility that is discharging waste or pollutants before 24 December 1987 (or within 120 days of that date) submits an application for a groundwater discharge plan within 60 days after receipt of written notice from the Secretary that an approved groundwater discharge plan is required.</p> <p>(NOTE: The following do not require an approved groundwater discharge plan under this chapter:</p> <ul style="list-style-type: none"> - effluent or leachate that has been demonstrated to conform to the groundwater quality standards and does not contain any potentially toxic pollutant (to determine compliance, the Secretary may require samples before the effluent or leachate discharges directly or indirectly into groundwater. If the discharge is by seepage through natural or altered natural materials, the Secretary may take samples of the solution before or after seepage. In order to sample solution after seepage, it may be necessary for the owner and operator to install groundwater monitoring wells. If, for any reason the Secretary does not have access to obtain the appropriate samples, this exemption does not apply) - water used for watering of lawns, gardens, or shrubs or for irrigation for the revegetation of a disturbed land area unless that water is received directly from a land application waste disposal system - water used for irrigated agriculture, except water received from land application waste disposal systems or wastes containing any potentially toxic pollutant in concentrations exceeding current scientifically based manufacturer's recommendations for the crop, soil, and climate - application of fertilizers, herbicides, insecticides, fungicides, rodenticides, and fumigants when used in accordance with current scientifically based manufacturer's recommendations for the crop, water, soil, and climate - discharge resulting from flood control systems, except those whose purpose is to contain potentially toxic pollutants - leachate which results from the direct natural infiltration of precipitation through any area of land affected by mining or milling operations, unless the Secretary determines that the leachate may result in pollution of waters of the state - leachate which results from the direct natural infiltration of precipitation through disturbed materials, unless the Secretary determines that the leachate may result in pollution of waters of the state

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.15.12.SD. Applications for renewal of groundwater discharge permits must be submitted 180 days prior to expiration (SDAR 74:54:02:05) [Citation Revised April 1998].</p>	<ul style="list-style-type: none"> - leachate which results entirely from the direct natural infiltration of precipitation through undisturbed materials - underground injection control (UIC) wells permitted by the state, and UIC Class II and Class III wells permitted by the USEPA - land application of livestock wastes, not to be construed as storage of livestock wastes, within expected crop nitrogen uptake.) <p>(NOTE: The Secretary may require the submission of an application for approval of a groundwater discharge plan for any exempted discharge that the Secretary determines may be causing or is likely to cause violations of the groundwater quality standards.)</p> <p>(NOTE: The following do not require a separately approved groundwater discharge plan if the discharge activity is subject to a review by the Secretary under other sections:</p> <ul style="list-style-type: none"> - underground injection control (UIC) wells permitted by the state and Class V UIC wells permitted by the USEPA - individual and small on-site wastewater systems in compliance with appropriate standards - wastewater treatment and disposal facilities with plans and specifications approved prior to construction by the Secretary and which have been issued either a surface water discharge or an USEPA NPDES permit. Wastewater treatment and disposal facilities that are designed to discharge to groundwater must submit a groundwater discharge plan application.)
<p>WA.15.13.SD. Facilities must notify the Secretary of commencement and discontinuance of groundwater discharge operations (SDAR 74:54:02:19) [Citation Revised April 1998].</p>	<p>Verify that the owner and operator of a groundwater discharge facility applies for a groundwater discharge permit renewal at least 180 days before the existing permit expires by submitting in writing to the Department of Environment and Natural Resources his intent to continue the discharge activity, changes to the original application and subsequent renewals, any proposed changes with supporting technical data, and anything else that is necessary to support renewal.</p> <p>Verify that facilities orally notify the Secretary of the groundwater discharge date immediately upon commencement of discharge and submit a written notice within 30 days.</p> <p>Verify that the facility orally notified the Secretary of the date of discontinuance of groundwater discharge and the reason within 10 days and submit a written notice confirming the oral report within 30 days.</p> <p>Verify that, if the discontinuance is due to a spill, leak, or other accidental release, the Secretary is notified immediately.</p>

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
WA.15.14.SD. Facilities must submit monitoring reports as required in discharge plan (SDAR 74:54:02:20) [Citation Revised April 1998].	Verify that reports of results obtained from any monitoring required in the discharge plan, and the methods used to obtain results, are periodically submitted to the Secretary according to the schedule specified in the approved groundwater discharge plan.
WA.15.15.SD. Facilities must report mechanical problems or discharge system failures (SDAR 74:54:02:21) [Citation Revised April 1998].	Verify that facilities immediately notify the Secretary of any mechanical or discharge system failures and submit a written statement confirming the oral report within 30 days.
WA.15.16.SD. Facilities with discharge operations potentially violating permit requirements must correct the system (SDAR 74:54:02:22) [Citation Revised April 1998].	Verify that, if monitoring or testing indicates that the permit conditions may be or are being violated by groundwater discharge operations, the facility makes corrections to the system immediately to prevent violations of the discharge permit. Verify that the facility takes immediate corrective action to clean up the groundwater.
WA.15.17.SD. Facilities with discharges that threaten waters of the state must notify the Secretary (SDAR 74:54:02:25) [Citation Revised April 1998].	Verify that any spills, leaks, or an accidental release, which threatens waters of the state, are immediately reported to the Secretary by the facility. Verify that the facility takes immediate action to remove and appropriately dispose of any contaminated soil or other materials. Verify that soils contaminated with chemicals are excavated and disposed of in a sanitary landfill or disposed of in an alternate manner approved by the Secretary. Verify that land application disposal of contaminated water and soil does not exceed the manufacturer's recommended application rate, if available, for the appropriate crops, soil, and climate. Verify that excavation is continued until the in-place material is below the applicable land application rate Verify that the facility removes additional contaminated soil if there is a potential discharge to groundwater that would violate groundwater standards. Verify that the facility develops and submits a cleanup and remedial action plan within 30 days that includes a compliance schedule.

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.20.</p> <p>TREATMENT WORKS</p> <p>WA.20.1.SD. Plans and specifications for proposed wastewater treatment works (WWTW) must be approved prior to construction (SDAR 74:53:03:02) [Citation Revised April 1998].</p> <p>WA.20.2.SD. Facilities planning to construct wastewater treatment systems must submit plans and specifications to the Secretary for review and approval (SDAR 74:53:01:03 and 74:53:01:04) [Citation Revised April 1998].</p>	<p>Verify that the owner of a proposed WWTW submits all construction plans and specifications and any additional information required to the Secretary for review and approval of items of construction and environmental significance that pertain to the proposed facility.</p> <p>(NOTE: No WWTW may be constructed until the Secretary has approved the plans and specifications for its construction.)</p> <p>(NOTE: “Wastewater treatment works (WWTW),” includes any facility used to control the disposal of pollutants that is under the jurisdiction of a municipality, 2 or more municipalities, a sanitary district, other political subdivisions within the state, or an Indian tribe.)</p> <p>(NOTE: 74:53:01 applies to the installation, construction, or operation of all wastewater treatment or dispersal systems or any other system for the treatment or disposal of human excreta, including abandoned wastewater systems. This section does not apply to onsite wastewater systems existing prior to 28 February 1975 unless the systems are changed, the systems cause the groundwater to become polluted, or the systems are allowing wastewater to surface.)</p> <p>Verify that facilities planning to construct a wastewater treatment system to receive human excreta submit plans and specifications to the Secretary for review and approval prior to construction.</p> <p>Verify that installation and operation of these systems is in accordance with the approved plans and specifications.</p> <p>(NOTE: A conventional individual onsite wastewater system may be designed and installed in accordance with this chapter without submission of project plans and specification to the Secretary for review and approval.)</p> <p>(NOTE: Where deviation from this chapter is desired by the owner, the proposed deviation must be submitted to the Secretary for review and approval along with plans, specifications, and supporting information prepared by a registered professional engineer or licensed plumber.)</p> <p>(NOTE: 74:53:01 applies to the installation, construction, or operation of all wastewater treatment or dispersal systems or any other system for the treatment or disposal of human excreta, including abandoned wastewater systems. This section does not apply to onsite wastewater systems existing prior to 28 February 1975 unless the systems are changed, the systems cause the groundwater to become</p>

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
WA.20.3.SD. Abandoned wastewater systems must meet specific abandonment criteria (SDAR 74:53:01:11) [Citation Revised April 1998].	<p>polluted, or the systems are allowing wastewater to surface.)</p> <p>Verify that abandoned wastewater systems are disconnected from buildings or facilities, pipes plugged, and receptacles dismantled or removed, and any void space in which such receptacles were contained are filled with soil.</p> <p>Verify that, before filling, receptacle contents are pumped out and disposed of in accordance with SDAR 74:03:01:78 (see WA.100.31.SD.).</p> <p>(NOTE: 74:53:01 applies to the installation, construction, or operation of all wastewater treatment or dispersal systems or any other system for the treatment or disposal of human excreta, including abandoned wastewater systems. This section does not apply to onsite wastewater systems existing prior to 28 February 1975 unless the systems are changed, the systems cause the groundwater to become polluted, or the systems are allowing wastewater to surface.)</p>
WA.20.4.SD. Wastewater must not be allowed to surface or enter state waters (SDAR 74:53:01:12) [Citation Revised April 1998].	<p>Verify that the facility does not cause or allow wastewater from an on-site system to be deposited upon the ground surface, or operate an onsite wastewater system that allows wastewater to surface upon the ground or enter any waters of the state.</p> <p>(NOTE: Graywater systems are exempt from this requirement in locations where they will not create a public nuisance or enter any waters of the state.)</p> <p>(NOTE: 74:53:01 applies to the installation, construction, or operation of all wastewater treatment or dispersal systems or any other system for the treatment or disposal of human excreta, including abandoned wastewater systems. This section does not apply to onsite wastewater systems existing prior to 28 February 1975 unless the systems are changed, the systems cause the groundwater to become polluted, or the systems are allowing wastewater to surface.)</p>
WA.20.5.SD. Wastewater must not be discharged into unused wells, gravel pits, or rock formations (SDAR 74:53:01:13) [Citation Revised April 1998].	<p>Verify that wastewater, treated or untreated, is not discharged into any abandoned or unused well, or discharged into any crevice, sinkhole, gravel pit, or naturally fissured rock formation, such as limestone.</p> <p>(NOTE: 74:53:01 applies to the installation, construction, or operation of all wastewater treatment or dispersal systems or any other system for the treatment or disposal of human excreta, including abandoned wastewater systems. This section does not apply to onsite wastewater systems existing prior to 28 February 1975 unless the systems are changed, the systems cause the groundwater to become polluted, or the systems are allowing wastewater to surface.)</p>
WA.20.6.SD. POTWs must	Verify that all POTWs provide notice to the Secretary of any new introduction of

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>notify the Secretary of introduction of certain pollutants from indirect dischargers (SDAR 74:52:03:12) [Citation Revised April 1998].</p> <p>WA.20.7.SD. Wastewater collection and treatment plant operators must be certified (SDAR 74:21:02:36, 74:21:02:38, 74:21:02:39, and 74:21:02:71) [Added February 2001; Citation Revised February 2007; Revised February 2009].</p> <p>WA.20.8.SD. Contracts and contractors for wastewater collection and treatment plant</p>	<p>pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants.</p> <p>(NOTE: A notice is also required for any substantial change in the volume or character of pollutants being introduced into that POTW by a source.)</p> <p>(NOTE: For purposes of this section, adequate notice includes information on the quality and quantity of pollutants introduced into the POTW and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.)</p> <p>(NOTE: 74:53:01 applies to the installation, construction, or operation of all wastewater treatment or dispersal systems or any other system for the treatment or disposal of human excreta, including abandoned wastewater systems. This section does not apply to onsite wastewater systems existing prior to 28 February 1975 unless the systems are changed, the systems cause the groundwater to become polluted, or the systems are allowing wastewater to surface.)</p> <p>(NOTE: This requirement applies to both drinking water and wastewater plant operators. This is repeated in WQ.6.1.SD.)</p> <p>Verify that the water treatment has a certified operator.</p> <p>Verify that any wastewater treatment system classified as Class I that serves 500 or more people using only stabilization ponds is under the supervision of an operator who has been certified as a Class I Stabilization Pond or Class I (or higher).</p> <p>Verify that the wastewater collection system for Class I that serves 500 or more people using only stabilization ponds is under the supervision of an operator who has been certified as a Class I (or higher) Wastewater Collection Operator.</p> <p>(NOTE: Operator certification to a certain class of an operational category entitles a person to operate a plant or system with the same or a lower corresponding classification. Plants and systems are divided into 4 operational categories. The 4 categories are as follows:</p> <ul style="list-style-type: none"> - wastewater collection system - wastewater treatment plant - water distribution system - water treatment plant. <p>Each operational category is classified in one of 4 classes designated as Class I, II, III, or IV according to complexity of operation. Class IV is the highest.)</p> <p>(NOTE: This requirement applies to both drinking water and wastewater plant operators. This is repeated in WQ.6.2.SD.)</p>

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>operations must meet specific requirements (SDAR 74:21:02:67, 74:21:02:68 and 74:21:02:69) [Added February 2001].</p>	<p>Verify that the contract operator has been approved by the Board.</p> <p>Verify that a contract for system operation contains the following provisions which will be considered by the board in granting or denying approval:</p> <ul style="list-style-type: none"> - the parties involved, including names, addresses, and phone numbers of each - the specific starting and expiration dates of the contract - the minimum number of visits each month and the minimum time of each visit to be spent on-site by the contract operator - the duties and responsibilities of each party involved - the signature of each party to the contract. <p>Verify that the contract operator meets the following criteria:</p> <ul style="list-style-type: none"> - hold valid certificates of the class and category for which the system is contracting - resides so as to allow response time of not to exceed one hour - be on call 24 hours a day and able to be on-site in emergencies - be on-site at least once a week or more as considered necessary by the board based on the technical nature of the system to be operated.

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
WA.90. LIMITATIONS FOR MIXING ZONES WA.90.1.SD. Mixing zones must meet specific requirements (SDAR 74:51:01:26 and 74:51:01:27) [Revised April 1998].	Verify that wastewater is properly treated to meet the chronic criterion established for receiving water at the edge of its zone of mixing. (NOTE: No mixing zones are allowed for lakes; lake discharges must meet the water quality standards at the point of discharge.)

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.95.</p> <p>OTHER DISCHARGES AND DISCHARGERS</p> <p>WA.95.1.SD. Concentrated animal feeding operations operating under a permit must meet inspection requirements (SDAR 74:57:01:03 through 74:57:01:06) [Added February 1999].</p>	<p>Verify that any concentrated animal feeding operation that is required to operate under a general permit or individual water pollution control permit or is required to obtain approval of plans and specification notifies the Secretary when construction of the manure management system begins and again at least 30 days before placing animals in the facility.</p> <p>Verify that animals are not placed in the facility until the Secretary conducts a construction inspection.</p> <p>Verify that there are no deviations from the approved plans and specifications for the manure management system unless the Secretary has granted prior approval.</p> <p>(NOTE: At a minimum, the secretary will conduct annual inspections of concentrated animal feeding operations with at least 2000 animal units that are required to operate under a general or individual water pollution control permit under SDCL chapter 34A-2 or required to obtain approval of plans and specifications under SDCL 34A-2-27. The number of livestock equivalent to 2000 animal units are:</p> <ul style="list-style-type: none"> - 2,000 slaughter or feeder cattle or dairy heifers - 1,400 mature dairy cattle, whether milked or dry cows - 5,000 finish hogs (finish unit) - 20,000 nursery hogs (nursery unit) - 4,260 sows (production unit -- breeding, gestating, and farrowing) - 540 sows (farrow to finish) - 1,000 horses - 20,000 sheep or lambs - 110,000 turkeys - 60,000 chickens - 10,000 ducks - 10,000 geese - a combination of any of the above livestock that equals 2,000 animal units.) <p>(NOTE: The Secretary will conduct inspections of all concentrated animal feeding operations required to operate under a general or individual water pollution control permit or required to obtain approval of plans and specifications at least one time every 3 years of operation. The Secretary shall inspect new animal feeding operations within the first 18 months of operation.)</p> <p>Verify that the producer notifies the Secretary if coverage under a water pollution control permit is no longer necessary or if the feeding operation is no longer in operation.</p> <p>(NOTE: Upon receipt of closure notice, the Secretary will conduct an inspection</p>

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	of the animal feeding operation before terminating coverage under the water pollution control permit.)

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.100</p> <p>INDIVIDUAL SEWAGE SYSTEMS</p> <p>WA.100.1.SD. On-site wastewater systems are prohibited when public wastewater systems are available (SDAR 74:53:01:07) [Citation Revised April 1998].</p>	<p>Verify that the facility does not construct, install, or operate an on-site wastewater system where a public wastewater system is available.</p> <p>(NOTE: A public wastewater system is considered available to premises under the following circumstances:</p> <ul style="list-style-type: none"> - the structure or wastewater system is located within the jurisdictional boundaries of a municipality or sanitary district - the sewer collection system of the public entity exists within 400 ft of the home, trailer court, commercial establishment, business, park, or institution - the municipality or sanitary district requests to provide service to the premises.) <p>(NOTE: All onsite wastewater systems designed for the reception and treatment of wastewater from premises including but not limited to homes, trailer courts, commercial establishments, businesses, parks, and institutions where public wastewater collection and treatment systems are not available, constructed after February 28, 1975, must be constructed, added to, and altered in accordance with this chapter. No onsite wastewater system, regardless of when constructed may cause a violation of any existing water quality standard, cause a health hazard, or fail to meet the requirements of sections 74:03:01:45 to 74:03:01:50, inclusive (see checklist items WA.100.3.SD., WA.100.4.SD., and WA.100.7.SD.)</p>
<p>WA.100.2.SD. On-site wastewater systems must meet minimum design and operating requirements (SDAR 74:53:01:14, 74:53:01:15, and 74:53:01:17) [Citation Revised April 1998].</p>	<p>(NOTE: The designer of each onsite wastewater treatment system must take into consideration the distance from any producing water well to the proposed septic tank and absorption system, the slope of the site and the gradient from any producing water well to the wastewater treatment system, the seasonal high groundwater table, the groundwater table, the percolation rate, the lot size, and the type and maximum daily wastewater flow to be treated by the wastewater treatment system.)</p> <p>Verify that there is at least 4 ft of soil between an absorption bed, trench, or seepage pit bottom, the lowest construction joint on a septic tank, or any other component of a subsurface absorption system and the seasonal high groundwater table, groundwater table, rock formations, or impervious soil strata.</p> <p>(NOTE: Absorption systems shall not be constructed in soils rated as having severe or very severe limitations for underground dispersal by the soil conservation service, U.S. Department of Agriculture, unless that limitation is not present as shown by field investigation or unless prior written approval is granted by the Secretary.)</p>

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.100.3.SD. Wastewater must receive primary treatment prior to discharge (SDAR 74:53:01:08) [Citation Revised April 1998].</p>	<p>Verify that drainage and runoff from footings, roofs, and groundwater sump pumps are not allowed to enter an onsite wastewater system.</p> <p>Verify that absorption systems are located and designed so that surface runoff from drainage ways will not flow into or over the system.</p> <p>Verify that absorption systems are not located in floodplains without prior written approval of the Secretary.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p> <p>Verify that wastewater passes through a septic tank, sedimentation tank, or aerobic system prior to discharge to an absorption system.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p>
<p>WA.100.4.SD. Individual or small on-site water-carriage wastewater systems must meet specific design and operating requirements (SDAR 74:53:01:09 and 74:53:01:16) [Citation Revised April 1998].</p>	<p>Verify that an individual or small onsite water-carriage wastewater system uses one of the following types of treatment:</p> <ul style="list-style-type: none"> - a conventional system consisting of a septic tank with a soil absorption system - an aerobic treatment unit utilizing a sedimentation process in conjunction with a soil absorption system - a septic tank with an evapotranspiration, an evapotranspiration-absorption, or a mound system - a holding tank - a septic tank with a graywater system - stabilization ponds, if plans and specifications are prepared, submitted, and approved. <p>Verify that water-carriage wastewater systems are not installed or operated:</p> <ul style="list-style-type: none"> - on a lot which is smaller than 20,000 ft² in surface area - on a lot that is smaller than 43,560 ft² (1 acre) when potable water is supplied by a private water supply system located on the lot. <p>(NOTE: A water-carriage wastewater system may be installed and operated on a lot which is 20,000 ft² in surface area or larger if the requirements of 74:03:01:56 are met and the premises are supplied by a public water supply system, a private water supply system not located on the lot, or by hauling and storage of potable water in a cistern.)</p> <p>(NOTE: These requirements do not apply if wastewater is emptied into a holding tank or an unconventional system is used.)</p>

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
WA.100.5.SD. All on-site wastewater systems must be located and maintained in accordance with minimum distance requirements (SDAR 74:53:01:19) [Citation Revised April 1998].	(NOTE: See applicability note in WA.100.1.SD.) Verify that all on-site wastewater system components are located and maintained in accordance with minimum distance requirements from pertinent ground and terrain features on or near the site of the system. (NOTE: See Appendix 12-2 for a table of minimum distances.) (NOTE: See applicability note in WA.100.1.SD.)
WA.100.6.SD. All on-site wastewater systems must be designed to meet flow capacity requirements (SDAR 74:53:01:20 through 74:53:01:22) [Citation Revised April 1998].	Verify that all onsite wastewater systems meet the flow capacity requirements listed in Appendix 12-3. (NOTE: See applicability note in WA.100.1.SD.)
WA.100.7.SD. Experimental systems must be approved by the Secretary prior to installation (SDAR 74:53:01:10) [Citation Revised April 1998].	(NOTE: Vault privies, chemical toilets, incinerator toilets, or composting units shall be used when a water or electrical system is not available.) Verify that, with the exception of vault privies, all unconventional systems are considered experimental systems, and plans and specifications are submitted to the Secretary for approval as an experimental system prior to installation. (NOTE: See applicability note in WA.100.1.SD.)
WA.100.8.SD. [Deleted February 2001]	[See WA.100.28.SD.]
WA.100.9.SD. Facilities must protect the potable water supply (SDAR 74:53:01:43) [Citation Revised April 1998].	Verify that no connection is made at any time between a tap or outlet furnishing potable water on any premises and a container or equipment holding wastewater by any means other than an open connection or back siphonage protection. (NOTE: See applicability note in WA.100.1.SD.)
WA.100.10.SD. Septic tanks must meet specific design and	Verify that septic tanks:

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
construction requirements (SDAR 74:53:01:23(1)) [Citation Revised April 1998].	<ul style="list-style-type: none"> - are watertight and constructed of durable materials designed to withstand expected physical loads - are capable of supporting a static vertical load of at least 1,000 pounds (psf) when bedded and backfilled to the top of the tank - including baffles or tees, are constructed of materials resistant to acid, decay, and corrosion. <p>Verify that prefabricated, coated metal tanks meet the requirements of the plumbing code.</p> <p>(NOTE: Coated metal tanks are not permitted for wastewater systems when the usage will be longer than 7 years.)</p> <p>Verify that concrete septic tanks are constructed of portland type II sulfate-resistant cement with a minimum strength of 3000 (psi).</p> <p>Verify that the walls, floors, and covers of concrete septic tanks poured onsite are at least 3 1/2 in. thick with reinforcing bars and welded wire mesh.</p> <p>Verify that fiberglass or plastic septic tanks have a minimum wall thickness of 1/4 in.</p> <p>Verify that all special reinforced precast concrete, concrete block, plastic, or fiberglass septic tanks meet the minimum static vertical load requirement of 1000 (psf) when bedded and backfilled to the top of the tank.</p> <p>Verify that the interior of concrete block septic tanks are surfaced with 2 1/4 in. coats of portland cement-sand plaster and have mortar joints.</p> <p>Verify that septic tank keyways or construction joints are made watertight by grouting with cement or corrosion-resistant sealants.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p>
WA.100.11.SD. Septic tanks larger than 3000 gal capacity must meet specific design and construction requirements (SDAR 74:53:01:23(2)) [Citation Revised April 1998].	<p>Verify that septic tanks larger than 3000 gal capacity and fabricated as a single unit consist of 2 or more compartments, with 1/2 to 2/3 of the tank capacity in the first compartment.</p> <p>Verify that the minimum dimension of any interior compartment is 2 ft.</p> <p>Verify that each compartment has at least one access hole with a minimum dimension of 20 in. located within 6 ft of all walls of the tank.</p> <p>Verify that the access holes extend through the top of the tank to a point within 12 in. but not closer than 6 in. below finished grade, and the access hole covers are covered with at least 6 in. of earth unless the cover is airtight and equipped with a hasp and lock, in which case the cover may be shallower or above grade.</p>

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.100.12.SD. Septic tanks must meet equipment requirements (SDAR 74:53:01:23(3) through (7)) [Citation Revised April 1998].</p>	<p>(NOTE: If the access hole to the tank is covered with more than 12 in. of earth backfill, the access hole shall be extended to within 6 in. of the finished grade.)</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p> <p>Verify that there are inspection pipes of at least 4 in. diameter over both the inlet and outlet devices that extend through the top of the tank and are capped flush or above finished grade with a removable watertight cap or cover.</p> <p>Verify that a downward projection of the centerline of the inspection pipe is directly in line with the centerline of the inlet or outlet device.</p> <p>Verify that the tank inlet and outlet devices consist of baffles or sanitary tees.</p> <p>Verify that the minimum dimension or diameter of septic tanks is 4 ft.</p> <p>Verify that the tank has a liquid depth of between 30 in. and 72 in. and a uniform horizontal flow throughout its length.</p> <p>Verify that the inlet elevation is at least 3 in. higher than the outlet elevation of the tank, and the outlet elevation at least 9 in. beneath the underside of the top of the tank or 20 percent of the total liquid depth, whichever is greater.</p> <p>Verify that the inlet baffle or tee penetrates at least 6 in., but not more than 20 percent of the total liquid depth below the liquid level in the tank and not lower than the outlet baffle or tee.</p> <p>Verify that the outlet baffle or tee penetrates at least 12 in., but not more than 35 percent of the total liquid depth in horizontal cylindrical tanks or 40 percent of the total liquid depth in rectangular tanks, below the liquid level in the tank.</p> <p>Verify that the inlet and outlet baffle or tee devices extend above the liquid level at least 8 in. or to within approximately 1 in. of the underside of the tank top.</p> <p>(NOTE: At least 1 inch of vent space shall be provided between the baffle or tee devices and the underside of the top of the tank. The separation distance between the inlet or outlet opening at the tank wall to the nearest point on baffles or tees shall not be less than 6 in. nor more than 12 in.)</p> <p>Verify that when a partition wall is used to form a multicompartiment tank, the partition wall opening is not less than 4 in. in diameter and not smaller than the diameter of the influent and effluent pipes, and located at the same elevation as the effluent pipe with sanitary tees or baffles having the same size and location requirements as for the inlet and outlet devices.</p> <p>Verify that the top of the partition wall, including baffles or tees, is set at least 1 in. below the underside of the tank top to provide adequate venting.</p>

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.100.13.SD. Septic tanks must meet installation requirements (SDAR 74:53:01:24) [Citation Revised April 1998].</p>	<p>Verify that all partitions, tees, and baffles are permanently and securely attached to the tank.</p> <p>Verify that the effluent pipe exiting the unit is at least 6 ft in length and unperforated until the first tee, distribution box, or drop box before the absorption field is encountered.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p> <p>Verify that septic tanks are installed on a solid, level base, with access hole covers 6 in. to 12 in. below the finished grade.</p> <p>(NOTE: If the cover is airtight, equipped with a hasp, and kept locked to prevent unauthorized access, the cover may be shallower or above grade.)</p> <p>Verify that the tank is installed at a depth that provides adequate gravity flow from the building or facility sewer that meets the requirements of the South Dakota state plumbing code.</p> <p>Verify that the tank is installed on undisturbed soil.</p> <p>(NOTE: If over-excavation occurs, it shall be backfilled with sand to the correct elevation and compacted.)</p> <p>Verify that backfilling around the tank is accomplished in a manner to prevent settlement and to prevent undue stresses on the tank and to the inlet and outlet pipes.</p> <p>Verify that, when multiple tanks are used to obtain the required liquid volume capacity, the tanks are connected in series, with the interconnecting pipes between tanks at least 6 ft in length and unperforated.</p> <p>(NOTE: No more than 4 tanks in series are permitted to obtain the required liquid volume capacity, with the first tank not smaller than any of the subsequent tanks in the series.)</p> <p>Verify that all tanks are located in an area that is accessible for the pumping of their contents and no constructed building or facility of any kind covers any of the tanks.</p> <p>Verify that flotation collars are used in areas with high groundwater potential.</p> <p>Verify that the inlet and outlet pipes are made watertight by grouting with cement or corrosion-resistant sealants.</p> <p>Verify that the pipes are supported on the outside of the tank to prevent failures due to settling.</p>

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.100.14.SD. Septic tanks must meet minimum capacity requirements (SDAR 74:53:01:25) [Citation Revised April 1998].</p>	<p>Verify that the pipes connecting septic tanks installed in series are cast iron soil pipe of 4-in. minimum diameter.</p> <p>Verify that during installation, any damage to the watertight coating or interior of a tank is repaired and tested by filling with water.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p> <p>Verify that all septic tanks receiving wastewater flows of 750 gal/day or less have a minimum capacity of at least 1000 gal of liquid before there is an overflow into the septic tank outlet.</p> <p>(NOTE: When a housing unit or a unit served by a septic tank contains more than 3 bedrooms, each bedroom in excess of 3 requires an additional 250-gal increase in the capacity of the septic tank beyond the 1000 gal. If a septic tank receives wastes from a garbage disposal, the overall capacity of the tank must be increased by an additional 20 percent.)</p> <p>Verify that septic tanks serving premises other than housing units or receiving wastewater flows of more than 750 gal/day but equal to or less than 1500 gal/day have a minimum liquid volume capacity to permit retention of incoming sewage at 150 percent of the average daily flow.</p> <p>Verify that septic tanks receiving wastewater flows greater than 1500 gal/day have a minimum liquid volume capacity (V) equal to at least 1125 gal plus 75 percent of the daily wastewater flow (Q), or $V = 1,125 + 0.75Q$.</p> <p>Verify that septic tanks serving premises where high amounts of oil or grease are anticipated are preceded by grease interceptors.</p> <p>(NOTE: Wastewater from garbage disposals may not be discharged to grease interceptors.)</p> <p>Verify that grease interceptors have a grease retention capacity of not less than 2 lb for each gallon per minute of flow.</p> <p>(NOTE: The minimum size of grease interceptors is 750 gal.)</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p>
<p>WA.100.15.SD. Holding tanks must meet specific capacity, design, and installation requirements (SDAR 74:53:01:26) [Citation</p>	<p>Verify that the minimum liquid holding capacity is 1000 gal or the wastewater flow generated over a period of 7 days, whichever is greater.</p> <p>Verify that there is no discharge of effluent from the tank.</p> <p>Verify that the tank is equipped with a high-water alarm positioned to allow at</p>

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
Revised April 1998].	<p>least 3 days of storage after the alarm is activated.</p> <p>Verify that holding tanks:</p> <ul style="list-style-type: none"> - are watertight and constructed of durable materials designed to withstand expected physical loads - are capable of supporting a static vertical load of at least 1,000 psf when bedded and backfilled to the top of the tank - including baffles or tees, are constructed of materials resistant to acid, decay, and corrosion. <p>Verify that prefabricated, coated metal tanks meet the requirements of the plumbing code.</p> <p>(NOTE: Coated metal tanks are not permitted for wastewater systems when the usage will be longer than 7 yr.)</p> <p>Verify that concrete holding tanks are constructed of portland type II sulfate-resistant cement with a minimum strength of 3,000 psi.</p> <p>Verify that the walls, floors, and covers of concrete holding tanks poured on-site are at least 3-1/2 in. thick with reinforcing bars and welded wire mesh.</p> <p>Verify that fiberglass or plastic holding tanks have a minimum wall thickness of 1/4-in.</p> <p>Verify that all special reinforced precast concrete, concrete block, plastic, or fiberglass holding tanks meet the minimum static vertical load requirement of 1000 lb/ft² when bedded and backfilled to the top of the tank.</p> <p>Verify that the interior of concrete block holding tanks is surfaced with 2 1/4 in. coats of portland cement-sand plaster and have mortar joints.</p> <p>Verify that holding tank keyways or construction joints are made watertight by grouting with cement or corrosion-resistant sealants.</p> <p>Verify that the installation of holding tanks meets the requirements for septic tanks (see WA.100.12.SD. above).</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p> <p>WA.100.16.SD. Septic tank effluent distribution to absorption fields must meet specific distribution standards (SDAR 74:53:01:28, 74:53:01:29, and 74:53:01:30) Verify that, on relatively flat terrain where the elevation difference of the ground surface does not exceed 6 in. in any direction within the absorption field, the septic tank effluent is directed to the absorption field through a system of interconnecting distribution pipes.</p> <p>Verify that on slightly sloping terrain where the elevation difference of the ground surface does not exceed 28 in. in any direction within the absorption filled, the</p>

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
[Citation Revised April 1998].	<p>septic tank effluent is distributed by a distribution box provided the final ground surface elevation of the lowest trench is at least 1 ft higher than the invert elevation of the outlets of the distribution box, and:</p> <ul style="list-style-type: none"> - inverts of all outlets are at the same elevation as measured from a liquid surface which is at least 4 in. above the distribution box floor - the inlet pipe invert is at least 1 in. higher than outlet inverts - each absorption line is connected separately to the distribution box and is not subdivided - if the septic tank effluent is pumped to the distribution box, either a baffle wall is installed in the distribution box or the pump discharge is directed against a wall of the box on which there is no outlet - the baffle is secured to the box and extends at least 1 in. above the crown of the inlet pipe - the distribution box is watertight with a removable cover, constructed of durable materials resistant to corrosion or decay and has sufficient capacity. <p>Verify that, on sloping terrain where the elevation difference of the ground surface exceeds 28 in. in any direction within the absorption field, a serial distribution system is installed as follows:</p> <ul style="list-style-type: none"> - connected with drop boxes or closed pipe relief lines in such a manner that each trench is completely filled with septic tank effluent to the full depth of the gravel before effluent flows to succeeding trenches - drop boxes or relief lines are placed on an undisturbed section of ground - the first drop box or relief pipe arrangement encountered should not have the crown of the outlet pipe at its highest point above the invert of the septic tank outlet - at each drop box or relief arrangement, the invert of the inlet pipe is between 1 and 2 in. higher than the invert of the outlet pipe to the succeeding trench - the slope of the trench between the invert of the outlet and the invert of the inlet of successive drop box or relief pipe arrangements is 1 in. per 100 ft - when septic effluent is delivered to the drop box by a pump, the pump discharge is directed against a baffle wall or against a wall of the box on which there is no outlet - the drop box is watertight with a removable cover, constructed of durable materials resistant to corrosion or decay, and has sufficient capacity to handle the maximum daily flow rate. <p>(NOTE: Percolation tests are required prior to approval and installation of absorption systems. Soil percolation tests must be conducted according to specifications.)</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p> <p>WA.100.17.SD. Absorption systems must comply with minimum area requirements</p> <p>Verify that the minimum area absorption beds or trenches in a water-carriage dispersal system that utilizes an absorption system is, expressed in square feet: the</p>

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
(SDAR 74:53:01:31 and 74:53:01:32) [Citation Revised April 1998].	<p>length times the width of the beds or trenches.</p> <p>Verify that the total absorption area (A) in square feet required for absorption beds or trenches is equal to the number derived by multiplying the gal per day of wastewater flow (Q) for which the system is designed by the square root of the rate of percolation, expressed in minutes per inch (t) and dividing this product by 5, as shown below:</p> $A = Qt/5$ <p>(NOTE: In no case may the gal per day of wastewater flow (Q) used in this formula be less than 750 or more than 7500.)</p> <p>Verify that, for systems receiving wastewater flows of less than 750 gal/day, Appendix 12-4 is used based on 120 gal/day per bedroom.</p> <p>(NOTE: This formula gives the required bottom area when 6 in. or more but less than 12 in. of fill material are placed below the distribution pipe for trenches and beds.)</p> <p>(NOTE: The required bottom area may be reduced by the following percentages for trenches only:</p> <ul style="list-style-type: none"> - 20 percent for 12 in. or more but less than 18 in. of fill material below the distribution pipe - 34 percent for 18 in. or more but less than 24 in. of fill material below the distribution pipe - 40 percent for 24 in. or more of fill material below the distribution pipe.) <p>(NOTE: The criteria in Appendix 12-4 may be used for the design of individual or small onsite wastewater systems if the absorption trench system is of an area sufficient for at least 3 bedrooms.)</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p> <p>Verify that, if a seepage pit is used, it is at the end of an absorption system, and the bottom of the pit is no more than 4 ft below the ground surface.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p> <p>Verify that the absorption system has at least 2 absorption trenches of approximately equal length as follows:</p> <ul style="list-style-type: none"> - the length of the trench with gravity flow may not exceed 100 ft - the width of a trench may not exceed 3 ft
WA.100.18.SD. Absorptions systems with seepage pits must meet specific criteria (SDAR 74:53:01:34) [Citation Revised April 1998; Citation Revised February 2007].	
WA.100.19.SD. Absorption systems must be equipped with absorption trenches (SDAR 74:53:01:35) [Citation	

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>Revised April 1998].</p> <p>WA.100.20.SD. Absorption beds must meet specific construction and design requirements (SDAR 74:53:01:36) [Citation Revised April 1998].</p>	<ul style="list-style-type: none"> - the bottom of the trench is at least 18 in. below the ground surface, but the depth does not exceed 4 ft. <p>Verify that the trench is constructed with a fill material consisting of washed gravel, crushed stone, slag, or clean bank run gravel ranging in size from 1/2 in. to 2-1/2 in. in diameter.</p> <p>Verify that an absorption line is placed within each trench and runs along the length of the trench:</p> <ul style="list-style-type: none"> - all absorption lines have the ends capped - fill material is at least 6 in. deep below the bottom of the absorption line and 2 in. deep above the top of the line - the bottom of the trench is uniformly graded to a slope from a minimum of 1/2 in. to a maximum of 4 in. per 100 ft - there is at least 6 ft of undisturbed soil between trenches - a closed-loop absorption trench system is level - to minimize sidewall compaction, trench excavation is made with bucket equipment with site cutters or raker teeth. <p>(NOTE: When the soil does not exceed the plastic limit, the trench walls and bottoms shall be scarified before graded material is added.)</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p> <p>Verify that seepage beds are not constructed where the soil percolation rate is 30 or more minutes per inch.</p> <p>Verify that a gravity absorption bed system consists of a level bed not exceeding 100 ft in length, 15 ft in width, and 3 ft in depth:</p> <ul style="list-style-type: none"> - each distribution line extends the length of the bed and is spaced no greater than 5 ft on center across the bed width - the distribution lines are preceded by a distribution box to provide uniform distribution of effluent - the outermost distribution line is not closer than 30 in. to the bed walls and all ends are capped if it is not a closed-loop system. <p>Verify that a pressurized absorption system, while it may exceed the length and width requirements in the above gravity absorption bed system, is not more than 3 ft in depth:</p> <ul style="list-style-type: none"> - the bed bottom is level - each distribution line is installed within the perimeter limits of the bed and spaced not greater than 10 ft on center across the bed - the bed is center-fed by a manifold pipe - the outermost distribution lines are not closer than 5 ft to the bed wall perimeter

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.100.21.SD. Plans for individual or on-site mound or evapotranspiration systems must be approved by the Secretary (SDAR 74:53:01:37(1)) [Citation Revised April 1998].</p>	<ul style="list-style-type: none"> - the distribution system is closed-loop or all ends are capped. <p>Verify that the following additional requirements are met for gravity and pressurized absorption bed systems:</p> <ul style="list-style-type: none"> - the distribution pipe network meets the requirements in 74:03:01:74(8) - the distribution lines are placed in at least a 12-in. layer of 1/2 to 1-1/2-in. diameter washed gravel with at least 6 in. of gravel beneath and 2 in. of gravel above each line - the gravel above the distribution line is covered with untreated building paper, then a 6-in. layer of loose marsh hay or straw, and then a top layer of 12 in. of soil over the entire bed. <p>(NOTE: Flax straw may not be used.)</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p>
<p>WA.100.22.SD. Mound and evapotranspiration systems must comply with siting restrictions (SDAR 74:53:01:37(2) through (4)) [Citation Revised April 1998].</p>	<p>Verify that plans and specifications are submitted to the Secretary by a registered professional engineer or licensed plumber for review and approval of any individual or small onsite mound or evapotranspiration system prior to construction.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p>
	<p>Verify that mound and evapotranspiration systems are not constructed on sites located in a floodplain. Verify that mound systems are not constructed on sites located on bedrock or on soils with percolation rates of 120 or more minutes per inch or 3 or fewer minutes per inch at a depth of 12 in. below the sand layer of the mound.</p> <p>Verify that mound or evapotranspiration systems are not located on natural slopes exceeding 12 percent under any soil percolation rate conditions.</p> <p>(NOTE: When a mound or evapotranspiration system is located on a slope, no buildings, driveways, other surface or subsurface obstructions, or future construction is permitted within 30 ft of the system on the down gradient side while the system is being used.)</p> <p>Verify that the system is located in open areas with maximum available sunshine.</p> <p>Verify that the area surrounding the systems is graded to provide for diversion of surface runoff water.</p> <p>Verify that the mound or evapotranspiration system is constructed only upon</p>

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>undisturbed naturally occurring soils.</p> <p>Verify that the bottom of the system bed is excavated to a depth from 8 to 12 in. below the ground surface and is completely level.</p> <p>(NOTE: The system may be round or rectangular.)</p> <p>Verify that the mound system is constructed so that the minimum distance between the seasonal high groundwater table and the invert elevation of the distribution system is 4 ft.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p>
WA.100.23.SD. Mound and evapotranspiration systems must meet standards for required bottom area (SDAR 74:53:01:37(5)) [Citation Revised April 1998].	<p>Verify that the system meets the minimum requirements for bottom area of the bed as calculated per Appendix 12-5.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p>
WA.100.24.SD. Mound and evapotranspiration systems must meet construction material standards (SDAR 74:53:01:37(6) and (7)) [Citation Revised April 1998].	<p>Verify that the fill material for the interior portion of a mound or evapotranspiration system consists of sandy loam soil, medium-size pit run sand, and pea rock or washed gravel ranging in size from 1/2-in. to 2 1/2-in. diameter.</p> <p>Verify that:</p> <ul style="list-style-type: none"> - the first layer of fill material placed on the excavated bed bottom is a minimum of 12 in. of sand - the next layer of fill material consists of at least 9 in. of the pea rock or washed gravel placed in the immediate area on which the distribution pipe system will be placed - after placement of the distribution pipe system, additional pea rock or washed gravel is added until there are at least 2 in. of cover over and around the entire pipe system - the rock or gravel layer is covered with untreated building paper - the finish fill consists of sandy loam soil placed on the untreated building paper to a depth of 1 foot in the center of the mound and to a depth of 6 in. at the sides tapered out onto the side of the sand filled layer - the exterior portion of mound consists of at least a 6-in. layer of loose marsh hay or straw over the sandy loam soil, covered with at least 6 in. of topsoil (flax straw may not be used) - the outside slopes may not be steeper than 3 feet horizontally to 1 ft vertically (3:1) - where the terrain slopes more than 7 percent, the downward slopes may not be steeper than 5 ft horizontally to 1 ft vertically (5:1) - the entire system is seeded, sodded, or otherwise provided with a grass cover

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.100.25.SD. Distribution piping for a mound and evapotranspiration systems must meet specific material, design, and installation standards (SDAR 74:53:01:37(8)) [Citation Revised April 1998].</p>	<p>(no shrubs, trees, or other woody vegetation may be planted on the top of the system).</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p> <p>Verify that the distribution pipe network for an elevated mound or evapotranspiration system consists of a dosing chamber, pump or siphon, 1 1/4-in. to 3-in. diameter flexible plastic pipe from the dosing chamber to the mound, and a manifold connected to the perforated distribution pipe.</p> <p>Verify that the distribution lines are installed as follows:</p> <ul style="list-style-type: none"> - each distribution line is installed within the perimeter limits of the bed and spaced not greater than 10 ft on center across the bed - the bed is center-fed by a manifold pipe - the outermost distribution lines are not closer than 5 ft to the bed wall perimeter - the distribution system is closed-loop or all ends are capped. <p>Verify that the pipe from the dosing chamber to the center of the mound is installed below the frost line or sloped uniformly back to the dosing chambers.</p> <p>Verify that the distribution lines have perforations spaced from 2 to 7 ft along the pipe with varying hole diameters from 3/16-in. to 1/2-in. to provide uniform pressure and distribution over the bed.</p> <p>Verify that:</p> <ul style="list-style-type: none"> - all drilled holes have burrs removed - all distribution pipe ends are capped - for gravity flow systems, all distribution pipes are at least 4 in. in diameter and spaced not greater than 5 feet on center across the bed width or closer than 30 inches to the bed wall perimeter. <p>(NOTE: See applicability note in WA.100.1.SD.)</p>
<p>WA.100.26.SD. Mound and evapotranspiration systems must be protected from livestock and heavy equipment (SDAR 74:53:01:37(9)) [Citation Revised April 1998].</p>	<p>Verify that livestock and heavy equipment are not allowed on the bed.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p>

COMPLIANCE CATEGORY:
WASTEWATER MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.100.27.SD. Facilities with graywater systems must comply with design requirements (SDAR 74:53:01:38) [Citation Revised April 1998].</p>	<p>Verify that graywater systems are designed according to the following criteria:</p> <ul style="list-style-type: none"> - all graywater treatment and recycle systems are located in accordance with distances specified in Appendix 12-2 - design of graywater systems for home or cabins is based on a minimum graywater flow of 25 gal/day per person - graywater tanks are septic tanks and conform to the requirements for septic tanks specified in checklist items WA.100.9.SD. through WA.100.11.SD. <p>(NOTE: Effluent from graywater systems may be recycled for toilet use, conveyed to absorption fields, mounds, or seepage pits, or used for irrigation of lawns and areas not intended for food production.)</p> <p>(NOTE: 3 day retention time shall be provided for each graywater tank. For other facilities, the design flow shall be specified on a case-by-case basis by the Secretary.)</p> <p>Verify that percolation tests are conducted and the minimum size of absorption area is determined in accordance with checklist items WA.100.15.SD. and WA.100.16.SD.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p>
<p>WA.100.28.SD. Facilities must not construct cesspools or pit privies (SDAR 74:53:01:18) [Citation Revised April 1998].</p>	<p>Verify that facilities do not construct cesspools or pit privies.</p> <p>(NOTE: The operation of a cesspool or a pit privy constructed after 28 February 1975 is prohibited.)</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p>
<p>WA.100.29.SD. Vault privies must meet certain requirements (SDAR 74:53:01:39) [Citation Revised April 1998].</p>	<p>Verify that vault privies are constructed to include:</p> <ul style="list-style-type: none"> - a fly-tight vault - a superstructure affording complete privacy - an earth mound around the top of the vault and below the floor level, which slopes downward away from the vault - a floor and rise of reinforced concrete at least 4 in. in thickness or other impervious material - a hinged, self-closing, fly-proof seat and lid of easily cleanable impervious material. <p>Verify all venting is fly-proofed with no. 16 or smaller mesh screening.</p> <p>Verify that the vault is located in an area that is accessible for the removal of its contents.</p>

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WA.100.30.SD. Unconventional systems must meet certain requirements (SDAR 74:53:01:40) [Citation Revised April 1998].</p>	<p>Verify that vaults are durable and have corrosion resistant material on the interior and exterior.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p> <p>Verify that unconventional systems, such as portable and nonportable chemical, composting, incinerating, recirculating, watersaving, or other innovative commercially manufactured toilets are sized, installed, operated, and maintained in accordance with the manufacturer's specifications.</p> <p>Verify that vaults, if required, are durable, corrosion-resistant material installed in accordance with the South Dakota State Plumbing Code, Chapter 20:54:1.</p> <p>Verify that units have receptacles of smooth, durable, impervious material that are resistant to chemicals and can be easily cleaned.</p> <p>Verify that all portable units are designed to receive and contain the wastes deposited in them and are located and maintained in a manner that will not create a nuisance condition.</p> <p>Verify that waste material from unconventional system units is disposed of in vault privies, holding tanks, or in accordance with checklist item WA.100.31.SD.</p> <p>Verify that, if systems employ new technology, they are considered experimental systems and their design contains provisions for a back-up system to be installed if the proposed system, once installed, is not functioning properly or is otherwise creating a hazard to the public health.</p> <p>Verify that the facility submits an application for temporary approval of experimental systems, for demonstration purposes, accompanied with documentation of reliability and applicability in full-scale operations and provided with written guarantee for service, component parts, or replacement provided by the manufacturer.</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p>
<p>WA.100.31.SD. Wastewater system wastes must be disposed according to specification (SDAR 74:53:01:41) [Citation Revised April 1998].</p>	<p>Verify that the disposal of wastewater, sludge, and human excreta is handled according to the following:</p> <ul style="list-style-type: none"> - septic tank, holding tank, and privy contents are discharged in a manner that eliminates all possibility of pollution from entering any well, water-bearing strata, or surfaces water supply and prevents the creation of a nuisance or menace to the health of any person - no part of the contents of a privy, holding tank, or septic tank is discharged onto the surface of the ground or into any water of the state, or transported in an unsanitary manner

COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>- final disposal of contents pumped from septic tanks, privies, or holding tanks is by burial or injection and a complete covering of earth.</p> <p>(NOTE: Disposal may be by other means only with prior written approval from the Secretary.)</p> <p>(NOTE: Final disposal of contents may be made into a public system if specific permission has been obtained for such disposal from local governmental officials and the public system has the equipment and facilities to provide at least secondary treatment to the contents.)</p> <p>(NOTE: See applicability note in WA.100.1.SD.)</p>

Appendix 12-1

Surface Water Quality Standards¹ for Toxic Pollutants
(Source: 74:51:01 Appendix B) [Deleted February 2010].

Appendix 12-2

Distance Between Onsite Wastewater System Components and Pertinent Ground Features

(Source: SDAR 74:53:01:19) [Citation Revised April 1998]

Wastewater System Components	Ground and Terrain Features						
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
Septic tank, aerobic system, or holding tank.	50	75	50	50	25	10	10
Absorption field, mound, evapotranspiration, seepage, pit, or graywater.	100	150	100	100	25	20	10
Sewer lines of tightly-jointed tile or equivalent material.	50	75	50	50	10	0	0
Sewer lines--materials, construction, and testing comply with AWWA standards for water mains.	30	30	25	3	10	0	0
Unconventional systems.	50	75	50	50	25	0	10

(A) = Wells over 100 ft deep

(B) = Wells less than 100 ft deep, springs, or water suction lines

(C) = Cisterns or reservoirs

(D) = High-water line of lakes, streams, or impoundments (meandered or ordinary, whichever is higher)

(E) = Pressurized water lines

(F) = Dwelling or occupied building

(G) = Property line -- all sides

Appendix 12-3

Wastewater Flow Capacity Requirements

(Source: SDAR 74:53:01:20 through 74:53:01:22) [Citation Revised April 1998]

All individual or small on-site wastewater treatment systems shall be designed to have a capacity at least equal to the anticipated maximum daily flow. For existing facilities where the average daily flow is measured, the anticipated maximum daily wastewater flow shall be assumed to be 150 percent of the average daily flow as the basis for the design of the system. In other cases, the anticipated maximum daily flow capacity shall be determined according to the type of facility as set forth in Table 1.

Table 1: Anticipated Maximum Daily Flow Capacity

	<u>Maximum Daily Flow</u> Gal/Person/Day [*Gal/Unit/Day]
Residential	
Boarding Houses (with food service)	50
Hotels and Motels (without private baths)	40
Hotels and Motels (with private baths)	50
Luxury Residences and Estates	150
Mobile Home Parks (minimum of 3.5 persons)	75
Mobile Home Parks (per space)	*250
Motels (with private baths and kitchenettes or laundry)	60
Multiple Family Dwellings or Apartments	75
Rooming Houses (rooms with baths)	40
Single Family Dwellings (minimum of 3.5 persons, or 120 gal per bedroom, whichever is greater)	75
Commercial	
Airport (per passenger, without food service)	5
Airport (per public toilet room)	*500
Automobile Service Station (per toilet room)	*500
Automobile Service Station (per vehicle served)	*10
Bars and Cocktail Lounges (per patron)	2
Bars and Cocktail Lounges (per seat)	*20
Bus Stations (without food service)	5
Commercial Employees (except factory, plant, or office)	10
Factories and Plants (exclusive of industrial waste)	35
Laundries, Self Service (per washer)	*600
Offices (per employee)	15
Restaurants (kitchen wastes per patron)	3
Restaurants, on Interstate or Through Highways (per seat)	*180
Restaurants (per seat)	*35
Restaurants (toilet and kitchen wastes per patron)	10
Restaurants (with paper service per patron)	1.5
Shopping Centers (per parking space)	2
Stores (per public toilet room)	*500
Theaters, Drive-in (not including food, per car space)	*10
Theaters, Movie, Auditorium Type (not including food, per seat)	*5
Work or Construction Camps (semipermanent, with flush toilets)	50

Table 1: Anticipated Maximum Daily Flow Capacity

	<u>Maximum Daily Flow</u> Gal/Person/Day [*Gal/Unit/Day]
Work or Construction Camps (semipermanent, without flush toilets)	25
Institutional	
Hospitals (per bed space)	250
Institutional and School Employees	15
Institutions Other Than Hospitals (per bed space)	125
Nursing or Rest Homes (per bed space)	100
Schools, Boarding	100
Schools, Day (without cafeteria, gym, shower)	15
Schools, Day (with cafeteria, but no gym or showers)	20
Schools, Day (with cafeteria, gym, and showers)	25
Recreational, Seasonal, or Other	
Assembly or Dance Halls	*75
Bowling Alleys (per lane)	*100
Bowling Alleys (with restaurants, per lane)	60
Cabins, Resort	30
Campgrounds, Developed	15
Camps, Luxury Resort	125
Churches (per sanctuary seat)	*5
Churches (with kitchens, per sanctuary seat)	*7
Cottages and Small Dwellings (seasonal occupancy)	50
Country Clubs, Employees	15
Country Clubs (per guest)	25
Country Clubs (per resident member)	100
Interstate Rest Areas	5
Parks, Picnic (toilet waste only)	5
Parks, Picnic (with bath houses, showers, flush toilets)	15
Parks, Travel Trailer (with individual water and sewer hook-ups, per space)	*100
Parks, Travel Trailers (without individual water and sewer hook-ups, per space)	*50
Parks (with central toilet and shower facilities, per space)	*75
Store, Resort	3
Swimming Pools with Bath Houses	10
Visitor Center	5

In lieu of calculating the wastewater flow capacity required pursuant to Table 1, Table 2 may be used to determine wastewater flow capacity for specific commercial or public service establishments when the amount of usage cannot be accurately determined. Flow projections expressed as gal per day (gpd) shall be calculated by multiplying total floor area in square feet of the commercial or public service establishment by the statistical factor given in Table 2.

Table 2: Alternative Method of Determining Wastewater Flow Capacity Requirements for Commercial or Public Service Establishments

Establishment	Statistical Factor
Banks	0.04
Barber Shops	0.20
Beauty Salons	0.20
Car Wash without Recycling Equipment	4.90
Department Store with Lunch Counter	0.08
Department Store without Lunch Counter	0.04
Drug Stores	0.13
Dry Goods Stores	0.05
Hotels	0.25
Laundries and Cleaners	0.31
Laundromats	3.68
Medical Office Buildings	0.62
Motels	0.23
Office Buildings	0.09
Retail Stores	0.05
Service Stations	0.18
Shopping Centers	0.18
Supermarkets	0.20
Warehouses	0.03

In lieu of calculating the wastewater flow capacity using Table 1, Table 3 may be used to determine wastewater flow capacity for public parks and marinas when the usage cannot be accurately determined. Flow projections, expressed as gal per fixture per hour, are based on the related statistical flow figures per unit of plumbing fixture. To determine the flow capacity of the system, multiply the number of hours the facility is open by the flow figure for each fixture available as given in Table 3.

Table 3: Alternative Method of Determining Wastewater Flow Capacity Requirements for Public Parks and Marinas

Type of Fixture	Gal/Hour
Faucets	15
Flush Toilets	35
Showers	100
Urinals	10

Appendix 12-4

Absorption Area

(Source: SDAR 74:53:01:32 and 74:53:01:33) [Citation Revised April 1998; Revised February 2007]

Percolation Rate (Minutes for water to drop 1 in.)	Minimum Absorption Trench Area (Square feet of trench bottom per bedroom)
1 but less than 5 min/in.	Not permitted -- see 70
5 but less than 10 min./in.	125 ft ²
10 but less than 15 min/in.	165 ft ²
15 but less than 30 min/in.	200 ft ²
30 but less than 45 min/in.	250 ft ²
45 but less than 55 min/in.	300 ft ²
55 but less than 60 min/in.	350 ft ²
over 60 min/in.	Not permitted *

(NOTE: The minimum absorption trench area, as shown in the above table, may be reduced in accordance with SDAR 7:53:01:31 (see WA.100.17.SD.) when the depth of fill material below the distribution pipe is 12 in. or greater.)

*An absorption system or alternative water-carriage system may be used when the percolation rate as determined by § 74:53:01:31 or 74:53:01:32 is between 5 and 60 minutes per inch if all other requirements for the absorption system or alternative water-carriage system are met. An alternative water-carriage system must be used when the percolation rate of the soil is slower than 60 minutes per inch or faster than 5 minutes per inch. An absorption system may be used where fill material is used to decrease the percolation rate from more than one but less than 5 minutes per inch to more than 5 but less than 60 minutes per inch

Appendix 12-5

Required Bottom Area of Beds for Mound and Evapotranspiration Systems

(Source: SDAR 74:53:01:37 (5)) [Citation Revised April 1998]

The required bottom area of the bed shall be calculated on the basis of a recommended or design application rate with respect to the soil percolation rate. For mound systems receiving less than 1,500 gal of wastewater per day, an application rate of 0.6 gal per square foot per day shall be used when the percolation rate is from 60 to 120 min per inch and an application rate of 0.83 gal per square foot per day shall be used when the percolation rate is 3 or more but less than 60 min per inch. For mound systems receiving 1,500 or more gal of wastewater per day, the application design rate shall equal the soil percolation rate plus the seasonal evapotranspiration rate as shown in the table below. For evapotranspiration systems, the application design rate is the seasonal evapotranspiration rate shown as follows:

Seasonal Evapotranspiration Rate	
Season of Use	Gal per square foot per day
Year Around	0.12
Summer	0.20
Winter	0.06

Soil Infiltration Rate	
Percolation Time (minutes per inch)	Gal per square foot per day
5 or more but less than 10	0.65
10 or more but less than 15	0.60
15 or more but less than 20	0.54
20 or more but less than 30	0.49
30 or more but less than 45	0.42
45 or more but less than 60	0.34
60 or more but less than 90	0.27
90 or more but less than 120	0.18
120	0.12

SECTION 13

WATER QUALITY MANAGEMENT

South Dakota Supplement, February 2010

This section covers the state requirements for Water Quality Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Definitions

- *Abandoned Well Or Test Hole* - a well or test hole whose original purpose and use has been permanently discontinued, which is in such a state of disrepair that its original purpose cannot be reasonably achieved, or which is abandoned pursuant to SDCL 46-6-27 (South Dakota Administrative Rules (SDAR) 74:02:04:20)) [Added February 2002].
- *Adequate Well* - a well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet (SDAR 74:02:04:20) [Added February 2002].
- *Affected Community* - the aquatic community where water quality will be improved or degraded (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Ambient* - the constituents or parameters and the concentration or measurements that describe water quality prior to a subsurface discharge (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Approved Laboratory* - a laboratory approved by the Department of Environment and Natural Resources to analyze water samples from public water systems to determine their compliance with maximum contaminant levels and other monitoring requirements of this chapter (SDAR 74:04:12:01) [Added February 2005].
- *Aquifer* - a geologic formation, a group of geologic formations, or part of a geologic formation that contains sufficient saturated permeable material to yield quantities of groundwater to wells and springs (SDAR 74:02:04:20) [Added February 2002].
- *Artesian Aquifer* - a confined aquifer (SDAR 74:02:04:20) [Added February 2002].
- *Attainable Beneficial Uses* - those beneficial uses that, at a minimum, can be achieved by the imposition of effluent limits and cost-effective and reasonable best management practices for nonpoint source control (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Aquatic Community* - an association of interacting stages of aquatic life in a given water body or habitat (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Aquatic Life* - an organism dependent on the water environment to either propagate or survive, or both (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Aquifer* - a geologic formation, group of geologic formations, or part of a geologic formation that contains sufficient saturated permeable material to yield economical quantities of waters and springs (SDAR 74:54:02:01) [Citation Revised April 1998].

- AWWA - American Water Works Association (SDAR 74:02:04:20) [Citation Revised February 2007].
- *Best Management Practices, BMPs* - schedules of activities, prohibitions of practice, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge, waste disposal, or drainage from raw material storage (SDAR 74:51:01:01) [Citation Revised April 1998; Revised March 2003].
- *Bioaccumulative Pollutants* - those pollutants that are taken up, retained, or accumulated in the bodies of organisms and are transferred by ingestion in increasing concentrations in the predator organisms to the point that one or more organisms in the food chain suffer significant harm (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Bioassay* - a procedure in which the responses of organisms are used to detect or measure the presence or effect of one or more substances, wastes, effluents, or environmental factors, alone or in combination (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Biochemical Oxygen Demand, BOD* - a standardized laboratory test used to determine the relative oxygen requirements of waters and wastewaters (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Biological Integrity* - the ability to support and maintain a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Board* - the South Dakota Board of Water Management (SDAR 74:51:01:01) [Citation Revised April 1998].
- *CAS Number* - a unique identifier assigned by the American Chemical Society to chemicals recorded in the Chemical Abstract Registry System (CAS). The CAS Number is used to conclusively identify a substance regardless of assigned name. Additional information concerning the CAS Registry System is available online at: <http://www.cas.org/EO/regsys.html> (SDAR 74:54:01:01) [Added February 2005].
- *Certificate of Approval* - a certificate issued by the secretary authorizing the operation of a new community or nontransient noncommunity water system (SDAR 74:04:09:01).
- *Class I Well* - a well used by generators of hazardous wastes or owners or operators of hazardous waste management facilities to inject hazardous waste, other than Class IV wells; and other industrial and municipal disposal wells which inject fluids beneath the lowest formation containing, within one-quarter mile of the well bore, an underground source of drinking water as defined in 74:55:01:23 (SDAR 74:55:02:01) [Added February 2007].
- *Class II Well* - a well which injects fluids for the enhanced recovery of oil or natural gas, or for the storage of hydrocarbons, which are liquid at standard temperature and pressure, or a well which injects fluids which are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters were classified as hazardous waste at the time of injection (SDAR 74:55:02:01) [Added February 2007].
- *Class III Well* - a well which injects fluids for extraction of minerals or energy, including those wells used for solution mining of minerals (SDAR 74:55:02:01) [Added February 2007].
- *Class IV Well* - a well used by generators of hazardous wastes or of radioactive wastes, by owners or operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous wastes or radioactive wastes into or above a formation which contains an underground source of drinking water within one-quarter mile of the well (SDAR 74:55:02:01) [Added February 2007].
- *Class V Well* - a well not included in Classes I – IV (SDAR 74:55:02:01) [Added February 2007].

- *Coldwater Aquatic Life (Animals)* - aquatic life including fish of the family *Salmonidae*, for example, trout and salmon (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Coldwater Marginal Fish Life Propagation* - a beneficial use assigned to surface waters of the state which support aquatic life and are suitable for stocked catchable-size coldwater fish during portions of the year, but which, because of critical natural conditions including low flows, siltation, or warm temperatures, are not suitable for a permanent coldwater fish population. Warmwater fish may also be present (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Coldwater Permanent Fish Life Propagation* - a beneficial use assigned to surface waters of the state which are capable of supporting aquatic life and are suitable for supporting a permanent population of coldwater fish from natural reproduction or fingerling stocking. Warmwater fish may also be present (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Commerce and Industry* - a beneficial use assigned to surface waters of the state which are suitable for use as cooling water, industrial process water, navigation, and production of hydroelectric power (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Community Water System, CWS* - a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 yr-round residents. The term includes any collection, treatment, storage, and distribution facilities under control of the operator of the system and used primarily in connection with the system and any collection or pretreatment storage facilities not under such control that are used primarily in connection with the system (SDAR 74:04:09:01) [Revised March 2003; Revised February 2007].
- *Contaminant* - any physical, chemical, biological, or radiological substance or matter in water potentially harmful to human health (SDAR 74:54:01:01) [Citation Revised April 1998].
- *Criterion* - a designated concentration of a substance, measure of a physical factor, or narrative statement that, when not exceeded, will protect an organism, a biological community, or a prescribed beneficial use or water quality (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Department* - the South Dakota Department of Environment and Natural Resources (SDAR 74:53:01:01) [Citation Revised April 1998; Revised March 2003].
- *Designated Beneficial Uses* - beneficial uses for each water body or segment whether or not they are being attained (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Direct Responsible Charge* - in smaller facilities where shift operation is not required, the person who is responsible and in active charge of the water treatment or wastewater treatment plant's or system's performance and operation. In larger facilities where shift operation is required, "direct responsible charge" means both active daily on-site technical direction and supervision and active daily on-site charge of an operating shift or a major segment of a system or facility. In facilities where shift operation is required, "direct responsible charge" is that person designated by the entity or municipality to serve as a supervisor for one on-site shift operation of a system or facility (SDAR 74:21:02:35) [Added February 2001].
- *Domestic Water Supply* - a beneficial use assigned to surface waters of the state that are suitable for human consumption, culinary or food processing purposes, and other household purposes after suitable conventional treatment (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Eight-Hour Composited Sample* - a sample composed of eight grab samples taken at 1-h intervals, the volume of each sample proportioned to flow, and physically mixed prior to analysis (SDAR 74:51:01:01) [Citation Revised April 1998].

- *Entry Point* - the entry point to the distribution system that is representative of each source of water after treatment (SDAR 74:04:12:01) [Added February 2005; Citation Revised February 2007].
- *EPA Regional Administrator* - the regional administrator of EPA Region 8 located at 999 18th St., Suite 300, Denver, CO 80202-2466 (SDAR 74:04:12:01) [Added February 2005; Citation Revised February 2007].
- *EPA Methods* - Methods for Chemical Analysis of Waters and Wastes, 1983, Environmental Protection Agency, Analytical Quality Control Laboratory (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Epilimnion* - in a thermally-stratified waterbody, the upper stratum of the water column. This layer is generally above the thermocline and is typically uniformly warm, circulating, and well mixed (SDAR 74:51:01:01) [Added February 2010].
- *Existing Beneficial Uses* - uses actually attained in surface waters of the state on 27 March 1973, whether or not they are so designated (SDAR 74:51:01:01) [Revised April 1998].
- *Facility Plan* - an engineering evaluation of present and future water supply, treatment, storage, or distribution needs; an evaluation of several alternatives; and the election and justification of a final alternative (SDAR 74:04:09:01).
- *Fish And Wildlife Propagation, Recreation, And Stock Watering* - a beneficial use classification assigned to all surface waters of the state which may support recreation in and on the water and fish and aquatic life, when sufficient quantities of water are present for sufficient duration to support those uses; provide habitat for aquatic and semi-aquatic wild animals and fowl; provide natural food chain maintenance; and are of suitable quality for watering domestic and wild animals (SDAR 74:51:01:01) [Added February 2000].
- *Geometric Mean* - the nth root of a product of n factors (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Handbook 69* - Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure, recommendations of the National Committee on Radiation Protection, National Bureau of Standards Handbook 69, (August 1963) (SDAR 74:51:01:01) [Citation Revised April 1998].
- *High-Quality Fishery Waters* - surface waters of the state designated for the beneficial use of coldwater permanent fish life propagation, coldwater marginal fish life propagation, or warmwater permanent fish life propagation (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Hypolimnion* -in a thermally-stratified waterbody, the bottom layer of water column. This layer is generally below the thermocline and is typically less well mixed (at times, stagnant), colder than the epilimnion, and often of essentially uniform temperature (SDAR 74:51:01:01) [Added February 2010].
- *Immersion Recreation* - a beneficial use assigned to surface waters of the state that are suitable for uses where the human body may come in direct contact with the water, to the point of complete submersion and where water may be accidentally ingested or where certain sensitive organs such as the eyes, ears, and nose may be exposed to water (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Impact* - a man-induced change in the chemical, physical, or biological quality or condition of surface waters of the state (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Impairment* - a detrimental effect on the aquatic community caused by an impact that prevents attainment of the designated use (SDAR 74:51:01:01) [Citation Revised April 1998].
- *IOC* - inorganic chemical (SDAR 74:04:12:01) [Added February 2005; Citation Revised February 2007].

- *Irrigation* - a beneficial use assigned to surface waters of the state which are suitable for irrigating farm lands, ranch lands, gardens, and recreational areas (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Lake* - a pond, reservoir, or other body of water, created by either natural or artificial means, but not a pond or appurtenance that is used for the treatment and disposal of wastes and that is permitted for such uses (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Lethal Concentration* - the concentration of a toxicant producing death of a test organism in a given period of time (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Limited-Contact Recreation* - a beneficial use assigned to surface waters of the state which are suitable for boating, fishing, and other water-related recreation other than immersion recreation where a person's water contact would be limited to the extent that infections of eyes, ears, respiratory or digestive systems, or urogenital areas would normally be avoided (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Managerial capacity* - the ability of a water system to conduct its affairs in a manner enabling the system to achieve and maintain compliance with the Safe Drinking Water Act as amended to August 6, 1996, requirements (SDAR 74:04:09:01).
- *Maximum Contaminant Level, MCL* - the maximum permissible level of a contaminant in water that is delivered to any user of a public water system (SDAR 74:04:12:01) [Added February 2005; Citation Revised February 2007].
- *Maximum Contaminant Level Goal, MCLG* - the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, and that allows an adequate margin of safety. MCLGs are nonenforceable health goals (SDAR 74:04:12:01) [Added February 2005; Citation Revised February 2007].
- *Metalimnion* - in a thermally stratified waterbody, the middle layer of a water column generally encompassing the thermocline, is typically somewhat mixed and influenced by the epilimnion (SDAR 74:51:01:01) [Added February 2010].
- *MF* - membrane filter used to signify that the number of bacteria was determined by means of the membrane filter technique (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Mg/L* - milligrams per liter (SDAR 74:04:12:01) [Added February 2005; Citation Revised February 2007].
- *MPN* - most probable number; a term used to signify that the number of bacteria was determined by means of the multiple-tube fermentation technique (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Municipal Swimming Pool* - any swimming pool which is owned or operated by a municipality (SDAR 74:04:08:01) [Added February 2005].
- *Nonpoint Source* - a source of pollution that is not defined as a point source (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Nontransient Noncommunity Water System, NTNC* - a public water system that is not a community water system and that regularly serves at least 25 of the same persons at such places as work places, offices, and schools for at least 6 mo a year (SDAR 74:04:09:01 and SDAR 74:04:12:01) [Citation Revised February 1999; Citation Revised February 2005].
- *NTU* - nephelometric turbidity unit (SDAR 74:04:12:01) [Citation Revised February 2005].
- *Observation or Monitoring Well* - a cased well used for measuring groundwater levels or collecting water samples (SDAR 74:02:04:20) [Added February 2002].

- *Parameter* - a chemical, physical, or biological characteristic that affects the use of surface waters of the state (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Person* - an individual, corporation, company, association, partnership, state, municipality, or federal agency (SDAR 74:04:12:01) [Added February 2005; Citation Revised February 2007].
- *PicoCurie (pCi)* - that quantity of radioactive material producing 2.22 nuclear transformations a minute (SDAR 74:54:01:01) [Citation Revised April 1998].
- *Pitless Unit or Pitless Adapter* - a unit or adapter designed to permit water service pipes to pass through the wall of the well casing below the frostline, to prevent entrance of contaminants, and to provide full access to the water system components within the well (SDAR 74:02:04:20) [Added February 2002].
- *Point Source* - a discernible, confined, and discrete conveyance, including a pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, animal feeding operation, or vessel or other flowing craft, from which pollutants are or may be discharged (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Pollutant* - dredged spoil, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, munitions, chemical waste, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, or cellar dirt or any industrial, municipal, or agricultural waste discharged into waters of the state, but not sewage from water craft, water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well and if the well is used either to facilitate production or for disposal purposes, and is approved by authority of the state after it is determined that such injection or disposal will not result in the degradation of ground or surface resources (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Pollution* - contamination or other alteration of the physical, chemical, or biological properties of any waters of the state that exceeds that permitted by state effluent or water quality standards, including change in temperature, taste, color, turbidity, or odor of the waters, or the discharge of a liquid, gaseous, solid, radioactive, or other substance into any waters of the state that will or is likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, safety, or welfare, to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish, or other aquatic life (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Pollution Source* - anything that causes groundwater pollution, including the following (SDAR 74:02:04:20) [Added February 2002]:
 1. Wastes, point source, and pollutant as defined by SDCL 34A-2-2
 2. Wastewater absorption, evapotranspiration, and graywater systems
 3. Seepage pits, cesspools, NoDak systems, mounds, and pit privies as described by chapter 74:03:01
 4. Barnyards, barn gutters, feedlots, animal pens, and farm silos.
- *Public Beach* - an area of an open body of water such as a lake or river specifically designated or zoned for public swimming by the Department of Game, Fish, and Parks, a federal agency, or other political subdivisions of the state (SDAR 74:04:08:01) [Added February 2005].
- *Public Water System* - a water supply system that provides water for human consumption to 15 or more service connections or that serves an average of 25 or more individuals for 60 or more days per yr (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Pump* - equipment installed at ground surface or in a well which delivers water from an aquifer or storage unit (SDAR 74:02:04:20) [Added February 2002].
- *Sanitary Survey* - an onsite review of the water source, facilities, equipment, operation, maintenance, and monitoring compliance of a public water system for the purpose of evaluating the adequacy of the drinking

water system, its source, treatment, and distribution, to produce and distribute a reliable and safe supply of drinking water (SDAR 74:04:11:01) [Added February 2004];

- *Segment* - a continuous stretch of water found between two points in the bed of a stream (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Sewer Lines* - buried pipe constructed and tested in compliance with ANSI/AWWA Standard C600-87, C603-90, or C900-89 (SDAR 74:02:04:20) [Added February 2002].
- *SOC* - synthetic organic chemical (SDAR 74:04:12:01) [Added February 2005; Citation Revised February 2007].
- *Spawning Bed* - a place where fish spawn (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Standard Methods* - Standard Methods for the Examination of Water and Wastewater, 17th edition, American Public Health Association, et al. (1989) (SDAR 74:51:01:01) [Citation Revised April 1998].
- *State* - as used in the portions of 40 C.F.R. Part 141 (July 1, 2003) incorporated by reference in this chapter means the South Dakota Department of Environment and Natural Resources (SDAR 74:04:12:01) [Added February 2005; Citation Revised February 2007].
- *Stream* - a river, creek, tributary, or other watercourse (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Surface Water of the State* - lakes, ponds, streams, rivers, wetlands, and any other body or accumulation of water on the land surface that is considered to be waters of the state, but not waste treatment systems, including treatment ponds, lagoons, leachate collection ponds, or stormwater retention ponds designed to meet the requirements of the CWA other than cooling ponds as defined in 40 CFR 423.11(m) (1 July 1991) (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Technical Capacity* - the physical infrastructure of the water system including the adequacy of the source water and the adequacy of treatment, storage, and distribution infrastructure and the ability of system personnel to adequately operate and maintain the system (SDAR 74:04:09:01).
- *Test Hole* - a hole designed to obtain information on groundwater quality or geological and hydrological conditions, or both (SDAR 74:02:04:20) [Added February 2002].
- *Test Well* - a well constructed for aquifer testing (SDAR 74:02:04:20) [Added February 2002].
- *Thermocline* - in a thermally-stratified waterbody, the depth range characterized by a rapid change in temperature with depth. A thermocline generally separates a well-mixed surface layer (epilimnion) and a more uniform bottom layer (hypolimnion) (SDAR 74:51:01:01) [Added February 2010].
- *Thirty-Day Average* - the arithmetic mean of a minimum of 3 consecutive grab or composite samples taken on separate weeks in a 30-day period (SDAR 74:51:01:01) [Revised April 1998].
- *Top of the Aquifer* - the uppermost point at which saturated conditions are found (SDAR 74:02:04:20) [Added February 2002].
- *Total Trihalomethanes (TTHM)* - the sum of the concentration in milligrams per liter of the trihalomethane compounds (trichloromethane [chloroform], dibromochloromethane, bromodichloromethane, and tribromomethane [bromoform]) (SDAR 74:54:01:01) [Revised April 1998].
- *Toxic Pollutant* - a pollutant or combination of pollutants, including disease-causing agents, which, upon exposure, ingestion, inhalation, or assimilation into an organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available, cause death, disease, behavioral abnormality, cancer, genetic mutation, physiological malfunctions including reproductive

malfuction, or physical deformity, in an organism or its offspring (SDAR 74:51:01:01) [Citation Revised April 1998].

- *Twenty-Four-Hour Composed Sample* - a sample composed of 24 grab samples taken at 1-h intervals, the volume of each sample proportioned to flow, and physically mixed prior to analysis (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Type S Systems* - public water systems that use groundwater. Type S systems do not include public water systems that combine all of their groundwater with surface water or with groundwater under the direct influence of surface water before treatment as a Type H system. Type S systems include consecutive systems receiving finished groundwater (SDAR 74:04:11.01) [Added February 2010].
- *Unconfined Aquifer or Water Table Aquifer* - an aquifer in which the uppermost groundwater surface is at atmospheric pressure (SDAR 74:02:04:20) [Added February 2002].
- *VOC* - volatile organic chemical (SDAR 74:04:12:01) [Citation Revised 2005].
- *Waiver* - a process used by the Department that allows a public water system to reduce or eliminate monitoring for a particular chemical (SDAR 74:04:12:01) [Citation Revised 2005].
- *Warmwater Aquatic Life* - aquatic life including the *Ictaluridae*, *Centrarchidae*, and *Cyprinidae* families of fish, for example, catfish, sunfish, and minnows, respectively (SDAR 74:51:01:01) [Citation Revised April 1998; Revised February 2000].
- *Warmwater Marginal Fish Life Propagation* - a beneficial use assigned to surface waters of the state which will support aquatic life and more tolerant species of warmwater fish naturally or by frequent stocking and intensive management but which suffer frequent fish kills because of critical natural conditions (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Warmwater Permanent Fish Life Propagation* - a beneficial use assigned to surface waters of the state which support aquatic life and are suitable for the permanent propagation or maintenance, or both, of warmwater fish (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Warmwater Semipermanent Fish Life Propagation Waters* - a beneficial use assigned to surface waters of the state which support aquatic life and are suitable for the propagation or maintenance, or both, of warmwater fish but which may suffer occasional fish kills because of critical natural conditions (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Water Supply System* - a system of pipes and other structures through which water is obtained and distributed for consumption from springs, wells and well structures, intakes and cribs, pumping stations, treatment plants, reservoirs, storage tanks, cisterns, and related appurtenances (SDAR 74:53:01:01) [Citation Revised April 1998].
- *Waters of the State* - all waters within the jurisdiction of this state, including streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, situated wholly or partly within or bordering on the state, but not waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA other than cooling ponds as defined in 40 C.F.R. 423.11(m) (1 July 1991) (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Well* - an artificial excavation or opening in the ground, made by means of digging, boring, drilling, jetting, or by any other artificial method, for the purpose of obtaining groundwater. Any series of openings, borings, or drillings developed and pumped collectively by a single pump unit shall be considered as one well (SDCL 46-1-6) [Added February 2004].

- *Well Rehabilitation* - restoration of a well to beneficial use by recasing, rebuilding, repairing, and resealing the well to provide for continued use of the well as a water supply, but not cleaning, acidizing, pump removal, or pump repair by itself (SDAR 74:02:04:20) [Added February 2002].
- *Wetlands* - those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions including swamps, marshes, bogs, and similar areas (SDAR 74:51:01:01) [Citation Revised April 1998].
- *Zone of Mixing* - an area in a stream where an effluent or discharge mixes with the upstream water (SDAR 74:51:01:01) [Citation Revised April 1998].

**WATER QUALITY MANAGEMENT
GUIDANCE FOR SOUTH DAKOTA CHECKLIST USERS**

REFER TO CHECKLIST ITEMS:	
Missing Checklist Items	WQ.2.1.SD.
State-Specific Requirements	
Operators	WQ.6.1.SD. through WQ.6.2.SD.
Operations	WQ.8.1.SD.
Public Water Systems	
General	WQ.10.1.SD. through WQ.10.4.SD.
Monitoring/Sampling	WQ.15.1.SD. through WQ.15.14.SD.
Lead and Copper	WQ.25.1.SD. through WQ.25.11.SD.
Notification and Reporting Requirements	WQ.30.1.SD. through WQ.30.10.SD.
Community Water Systems	
Standards	WQ.35.1.SD and WQ.35.2.SD.
Monitoring/Sampling	[Deleted]
Notification and Reporting Requirements	[Deleted]
Noncommunity Water Systems	
Monitoring/Sampling	[Deleted]
Lead and Copper	[Deleted]
Notification and Reporting Requirements	[Deleted]
Nontransient Noncommunity Water Systems	WQ.76.1.SD. through WQ.76.2.SD.
Drinking Water Wells	WQ.90.1.SD. through WQ.90.11.SD.
Miscellaneous Wells	WQ.100.1.SD. through WQ.100.9.SD.
Underground Injection Control (UIC)	
Class I Wells	WQ.110.1.SD. and WQ.110.2.SD.
Class IV Wells	WQ.113.1.SD.
Class V Wells	WQ.114.1.SD.
Water Quality Standards	WQ.115.1.SD. through WQ.115.21.SD.
Swimming Pools	WQ.150.1.SD. and WQ.150.2.SD.

GUIDANCE FOR APPENDIX USERS

REFER TO APPENDIX NUMBERS:	REFER TO APPENDIX TITLES:
13-1	Deleted
13-2	Deleted
13-3	Deleted
13-4	Human Health Standards
13-5	Potential Toxic Pollutants
13-6	Water Quality Criteria for Specific Beneficial Uses
13-7	Deleted

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WQ.2.</p> <p>MISSING CHECKLIST ITEMS</p> <p>WQ.2.1.SD. Federal facilities are required to comply with all applicable state regulatory requirements not contained in the checklist (a finding under this checklist item will have the citation of the applied regulation as a basis of findings).</p>	<p>Determine whether any new regulations have been issued since the finalization of the manual.</p> <p>Determine whether the Federal facility has activities or facilities that are regulated but not addressed in the checklists.</p> <p>Verify that the Federal facility is in compliance with all applicable and newly issued regulations.</p>

COMPLIANCE CATEGORY: WATER QUALITY MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
STATE-SPECIFIC REQUIREMENTS <p>WQ.6 Operators</p> <p>WQ.6.1.SD. Water distribution and treatment plant operators must be certified (SDAR 74:21:02:36, 74:21:02:38, 74:21:02:39, and 74:21:02:71) [Added February 2001; Citation Revised February 2007; Revised February 2009].</p>	<p>(NOTE: This requirement applies to both drinking water and wastewater plant operators. This is repeated in WA.20.7.SD.)</p> <p>Verify that the water distribution or water treatment has a certified operator.</p> <p>Verify that groundwater systems classified as Class I that serve less than 500 people that do not treat the water are under the supervision of an operator who has been certified as a Class I Very Small Water System Operator or a Class I (or higher) Water Distribution Operator.</p> <p>Verify that groundwater systems classified as Class I that serve less than 500 people that treat the water are under the supervision of an operator who has been certified as a Class I Small Water Treatment System or Class I (or higher) Water Treatment Operator.</p> <p>Verify that the distribution system classified as Class I that serve less than 500 people are under the supervision of an operator who has been certified as a Class I (or higher) Water Distribution Operator.</p> <p>(NOTE: Operator certification to a certain class of an operational category entitles a person to operate a plant or system with the same or a lower corresponding classification. Plants and systems are divided into 4 operational categories. The 4 categories are as follows:</p> <ul style="list-style-type: none"> - wastewater collection system - wastewater treatment plant - water distribution system - water treatment plant <p>Each operational category is classified in one of 4 classes designated as Class I, II, III, or IV according to complexity of operation. Class IV is the highest. Classification of collection and distribution systems shall be based upon population served. Classification of treatment plants and systems shall be based upon a point system in accordance with §§ 74:21:02:60 and 74:21:02:61.)</p>
<p>WQ.6.2.SD. Contracts and contractors for water distribution and treatment plant operations must meet specific requirements (SDAR 74:21:02:67, 74:21:02:68 and 74:21:02:69) [Added</p>	<p>(NOTE: This requirement applies to both drinking water and wastewater plant operators. This is repeated in WA.20.8.SD.)</p> <p>Verify that the contract operator has been approved by the Board.</p> <p>Verify that a contract for system operation contains the following provisions</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
February 2001; Revised February 2010].	<p>which will be considered by the board in granting or denying approval:</p> <ul style="list-style-type: none"> - the parties involved, including names, addresses, and phone numbers of each - the specific starting and expiration dates of the contract - the minimum number of visits each month and the minimum time of each visit to be spent on-site by the contract operator - the duties and responsibilities of each party involved - the signature of each party to the contract. <p>Verify that the contract operator meets the following criteria:</p> <ul style="list-style-type: none"> - holds valid certificates of the class and category for which the system is contracting - resides in a location so that response time does not exceed 1 h - is on call 24 h a day and is on-site in emergencies - is on-site at least once a week or more as considered necessary by the board based on the technical nature of the system operated.

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>STATE-SPECIFIC REQUIREMENTS</p> <p>WQ.8. Operations</p> <p>WQ.8.1.SD. Municipal water supplies must maintain fluoride levels within a specific range (SDAR 74:04:01:03).</p>	<p>Verify that the average natural fluoride ion content of the water from any source for a municipal water supply is 0.9 mg/l or greater and 1.7 mg/l or less.</p> <p>(NOTE: If the average natural fluoride ion content of the water from any source for a municipal water supply is less than 0.9 mg/l, equipment must be provided and operated to adjust the fluoride ion concentration in the range of 0.9 mg/l to 1.7mg/l, with an optimum level of 1.2 mg/l. Those municipal water supplies with average natural fluoride ion concentrations in excess of 1.7 mg/l must consult the Department of Environment and Natural Resources prior to initiating procedures for reducing the fluoride ion content to an optimum amount.)</p>

COMPLIANCE CATEGORY: WATER QUALITY MANAGEMENT South Dakota Supplement		
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010	
PUBLIC WATER SYSTEMS		
WQ.10. General		
WQ.10.1.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:02 repealed.)	
WQ.10.2.SD. Public water systems adding fluoride to drinking water must obtain written approval from the Department and meet Department standards (SDAR 74:04:01:02 and 74:04:01:04) [Revised February 2005].	Verify that the public water system has obtained written approval from the Department of Environment and Natural Resources prior to the implementation of proposals for the addition of fluoride ion to municipal water supplies. Verify that the chemical feeder apparatus for introducing fluoride ion into the water supply is constructed, installed, and operated in accordance with the standards of the Department of Environment and Natural Resources. (NOTE: See WQ.8.1.SD. and WQ.30.6.SD. for additional fluoride requirements.)	
WQ.10.3.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:43 repealed.)	
WQ.10.4.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:43.01 repealed.).)	

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
PUBLIC WATER SYSTEMS WQ.15. Monitoring/Sampling	
WQ.15.1.SD. All public water systems must comply with MCLs (SDAR 74:04:12:06 and 74:04:12:07) [Revised February 2005; Revised February 2010].	<p>(NOTE: For purposes of chapter, 74:04:12, the term, reliably and consistently less than the maximum contaminant level has the following meaning.)</p> <p>Verify that for VOCs, SOCs, and IOCs except nitrate and nitrite, the average of the initial sample and quarterly samples is less than the MCL.</p> <p>Verify that for nitrate, the average of 4 consecutive quarterly samples is less than 7.5 mg/L and no single sample exceeds 10 mg/L.</p> <p>Verify that for nitrite, the average of 4 consecutive quarterly samples is less than 0.75 mg/L and no single sample exceeds 1 mg/L.</p> <p>(NOTE: The maximum contaminant levels for chemicals found in 40 C.F.R. Part 141 Subpart B (July 1, 2009) are hereby incorporated by reference.)</p>
WQ.15.2.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:04.03 repealed.)
WQ.15.3.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:04.04 repealed.)
WQ.15.4.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:04 and 74:04:05:04.01 repealed).
WQ.15.5.SD. [Deleted February 2004].	(NOTE: Equivalent to Federal requirements.)
WQ.15.6.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:07.01 repealed.)

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
WQ.15.7.SD. Public water systems must meet general monitoring requirements (SDAR 74:04:12:04) [Revised February 2005].	<p>Verify that the water system monitors at the time designated by the department within each compliance period.</p> <p>(NOTE: Systems may apply to the department to conduct more frequent monitoring than the minimum monitoring frequencies specified. The department may increase the required monitoring frequencies if necessary to detect variations within a system such as fluctuations in concentration due to seasonal use or changes in water sources, or to characterize water system contamination.)</p>
WQ.15.8.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:22 repealed.).
WQ.15.9.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:20.01 repealed.).
WQ.15.10.SD. [Deleted February 2004].	(NOTE: Equivalent to Federal requirements.)
WQ.15.11.SD. Approved laboratories must be used for sampling, monitoring, and analytical requirements (SDAR 74:04:12:09) [Revised February 2005].	<p>Verify that analysis has been performed by an approved or certified laboratory.</p> <p>(NOTE: Measurements for alkalinity, calcium, conductivity, disinfectant residual, orthophosphate, pH, silica, temperature, and turbidity may be performed by any person acceptable to the Department based on education, training, or experience.)</p>
WQ.15.12.SD. Public water systems must meet the monitoring and analytical requirements found in 40 CFR Part 141, Subpart C (SDAR 74:04:12:08) [Added March 2002; Revised February 2005; Revised February 2010].	<p>(NOTE: The monitoring and analytical requirements found in 40 C.F.R. Part 141 Subpart C (July 1, 2009) are hereby incorporated by reference.)</p> <p>Verify that the applicable monitoring and analytical requirements are met.</p>
WQ.15.13.SD. Public water systems that use surface water or groundwater under the direct influence of surface water	Verify that a public water system that uses surface water or groundwater under the direct influence of surface water and does not practice filtration in compliance with 40 C.F.R. Part 141 Subpart H (July 1, 2009), collects at least one sample near the first service connection each day that the turbidity level of the source water

**COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement**

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>water and does not practice filtration must meet total coliform sampling requirements (SDAR 74:04:12:10 and 74:04:12:11) [Added March 2002; Revised February 2005; Revised February 2010].</p> <p>WQ.15.14.SD. Public water systems must conduct initial monitoring (SDAR 74:04:12:05) [Added February 2005].</p>	<p>exceeds one NTU.</p> <p>Verify that the system collects this coliform sample within 24 hours after the first sample showing turbidity in excess of one NTU or on the next business day and submit the sample for total coliform analysis.</p> <p>Verify that, if a routine sample is total coliform-positive, the public water system collects a set of repeat samples within 24 hours or on the next business day after being notified of the positive result.</p> <p>(NOTE: A system that collects more than one routine sample per month must collect no fewer than 3 repeat samples for each total coliform-positive sample found. A system that collects one routine sample per month or fewer must collect no fewer than 4 repeat samples for each total coliform-positive sample found. Sample results from this coliform monitoring must be included in determining compliance with the MCL for total coliform.)</p> <p>Verify that, if a system collecting fewer than 5 routine samples each month has one or more samples positive for total coliform and the department does not invalidate the samples under 40 C.F.R. § 141.21(c) (July 1, 2009), the system collects at least 5 routine samples during the next month that it serves water to the public.</p> <p>(NOTE: The department may waive the requirement of 5 routine samples during the next month if it has determined why the sample was positive for total coliform and establishes that the system has corrected the problem before the end of the next month that it serves water to the public. The department shall document the waiver decision in writing, have it approved and signed by the supervisor of the department official who recommends the decision, and make the document available to EPA and the public. The document shall describe the specific cause of the sample positive for total coliform and what corrective action the system has taken. A waiver may not be granted solely on the grounds that all repeat samples are negative for total coliform.)</p> <p>Verify that a public water system collects its normal number of routine samples before the end of the next month that it serves water to the public and use the normal routine samples to determine compliance with the MCL for total coliform.</p> <p>Verify that a newly constructed water system, a water system that uses a new source, or a system determined by the department to be a public water system begins monitoring as required within one quarter after the determination or the construction of the new water system or the new source.</p> <p>Verify that a public water system proposed for construction, whenever possible, collects and analyzes the proposed source water for compliance prior to construction.</p>

<p style="text-align: center;">COMPLIANCE CATEGORY: WATER QUALITY MANAGEMENT South Dakota Supplement</p>	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
PUBLIC WATER SYSTEMS	
WQ.25. Lead and Copper	
WQ.25.1.SD. [Deleted February 2004].	(NOTE: Equivalent to Federal requirements.)
WQ.25.2.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:78 repealed.)
WQ.25.3.SD. [Deleted February 2004].	(NOTE: Equivalent to Federal requirements.)
WQ.25.4.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:81 repealed.)
WQ.25.5.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:82 repealed.)
WQ.25.6.SD. [Deleted February 2004].	(NOTE: Equivalent to Federal requirements.)
WQ.25.7.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:86 repealed.)
WQ.25.8.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:97 repealed.)
WQ.25.9.SD. [Deleted	(NOTE: Equivalent to Federal requirements.)

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>February 2004].</p> <p>WQ.25.10.SD. Optimal corrosion control must be used to control lead and copper (SDAR 74:04:12:25) [Added February 2004; Revised February 2005; Revised February 2010].</p>	<p>Verify that each system properly installs and operates the optimal corrosion control treatment designated by the department.</p> <p>(NOTE; The department shall evaluate the results of all lead and copper tap water samples and water quality parameter samples to determine whether the water system has properly installed and operated the optimal corrosion control treatment designated by the department. Upon reviewing the results of tap water and water quality parameter monitoring by the system both before and after the system installs optimal corrosion control treatment, the department shall designate:</p> <ul style="list-style-type: none"> - a range of values for pH measured at each entry point and in all tap samples - if a corrosion inhibitor is used, an inhibitor concentration range measured at each entry point to the distribution system and in all tap samples - if alkalinity adjustment is used, an alkalinity concentration range measured at each entry point and in all tap samples - if calcium carbonate stabilization is used, a calcium concentration range measured in all tap samples. <p>The department may modify its determination and make the revised determination in writing and provide an implementation schedule.)</p> <p>Verify that all systems maintain water quality parameter values within the range designated by the department.</p> <p>Verify that, if the water quality value is outside the designated range and the system takes a confirmation sample no later than 3 days after the first sample, the result are averaged with the first sampling result and the average is used for compliance determinations.</p> <p>(NOTE: The department shall allow the EPA regional administrator to review treatment determinations made by the department and issue federal treatment determinations as specified in 40 C.F.R. § 148.82(i) (July 1, 2009).)</p>
<p>WQ.25.11.SD. [Deleted February 2005].</p>	<p>(NOTE: SDAR 74:04:05:93 repealed.)</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
PUBLIC WATER SYSTEMS	
WQ.30. Notification and Reporting Requirements	
WQ.30.1.SD. [Deleted February 2004].	(NOTE: Equivalent to Federal requirements.)
WQ.30.2.SD. Water systems must meet the reporting and recordkeeping requirements found in 40 CFR Part 141, Subpart D (SDAR 74:04:12:17) [Revised March 2003; Revised February 2005; Revised February 2010].	(NOTE: The reporting and recordkeeping requirements found in 40 C.F.R. Part 141 Subpart D (July 1, 2009). See WQ.30.6.SD., WQ.30.7.SD., WQ.30.8.SD., and WQ.30.9.SD.) Verify that all applicable reporting and recordkeeping requirements are met.
WQ.30.3.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:66 repealed.)
WQ.30.4.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:70 repealed.)
WQ.30.5.SD. [Deleted February 2005].	(NOTE: SDAR 74:04:05:73 repealed.)
WQ.30.6.SD. Public water systems must maintain records of the daily fluoride content of the distribution system (SDAR 74:04:01:07).	Verify that these records show the amount of fluoride chemical feed to the system, fluoride test results, amount of water pumped, and any other pertinent information required by the Department of Environment and Natural Resources, and are available for review by the Secretary. (NOTE: A new water system is a system that will become a community water system or NTNC on or after October 1, 1999. Any system that has infrastructure in place before 1 October 1999, and then becomes a new water system by the addition of new users is not required to obtain a certificate of approval. (WQ.35.1.SD and WQ.35.2.SD are repeated in WQ.76.1.SD. and WQ.76.2.SD.)

COMPLIANCE CATEGORY: WATER QUALITY MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WQ.30.7.SD. Public water systems are required to provide additional public notice in certain situations (SDAR 74:04:12:33) [Added March 2003; Revised February 2005; Revised February 2010].</p>	<p>(74:04:09:02))</p> <p>(NOTE: Other violations and situations determined by the department to require a public notice not already listed in 40 C.F.R. § 141 Subpart Q, Appendix A, (July 1, 2009) for purposes of this chapter, are defined as circumstances that may present a potential danger to drinking water system consumers.)</p> <p>Verify that the following circumstances are reported to the public:</p> <ul style="list-style-type: none"> - source contamination - spills - accidents - natural disasters - conditions found during an inspection of the system - breakdowns in water treatment.
<p>WQ.30.8.SD. Public water systems with a Tier 1 violation or other situation must comply with additional state public notification requirements (SDAR 74:04:12:35 and 74:04:12:36) [Added March 2003; Revised February 2005; Revised February 2010].</p>	<p>(NOTE: Public water systems with a Tier 1 violation or other situation as specified in 40 CFR 141.202 (July 1, 2009). The public notice requirements for Tier 1 public water systems can be found in the U.S. TEAM guide at WQ.30.7.US. The state of South Dakota has established additional public notification requirements.)</p> <p>Verify that the water systems provide the notice within 24 hours in a form and manner reasonably calculated to reach all persons served by the system.</p> <p>Verify that the form and manner used by the system fits the specific situation, but is designed to reach residential, transient, and nontransient users of the system.</p> <p>Verify that, in order to reach all persons served, the system uses, at a minimum, one or more of the following forms of delivery:</p> <ul style="list-style-type: none"> - appropriate broadcast media, to include radio and television - posting the notice in conspicuous locations throughout the area served by the water system - hand delivery of the notice to persons served by the water system. <p>Verify that, once a public notification is posted, the notice remains in place until the violation or situation has been resolved as determined by the department.</p> <p>Verify that, in no case is posted for less than 7 days, even if the violation or situation has been resolved.</p> <p>Verify that a public notification made by broadcast media is aired a minimum of 3 times during the 24-hour period specified in subdivision (1) of this section.</p>

COMPLIANCE CATEGORY: WATER QUALITY MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WQ.30.9.SD. Public water systems with specific violations or other situations must comply with additional Tier 2 public notification requirements (SDAR 74:04:12:37) [Added February 2004; Revised February 2005].</p>	<p>(NOTE: The public notice requirements for Tier 2 public water systems can be found in the U.S. TEAM guide at WQ.30.8.US. The state of South Dakota has established additional public notification requirements. These requirements are in addition to the Tier 2 public notice categories found in 40 C.F.R. § 141.203(a).)</p> <p>Verify that the following violations and other situations require a Tier 2 public notice (rather than a Tier 3 public notice):</p> <ul style="list-style-type: none"> - any microbiological repeat monitoring violation - failure to monitor or failure to report for either nitrate or nitrite or both - failure to monitor or failure to report for turbidity.
<p>WQ.30.10.SD. [Deleted February 2005].</p>	<p>(NOTE: SDAR 74:04:06:29 repealed.)</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>COMMUNITY WATER SYSTEMS</p> <p>WQ.35. Standards</p> <p>WQ.35.1.SD. A new water system must have approval prior to construction and prior to providing water (SDAR 74:04:09:04, 74:04:09:10, 74:04:09:15, and 74:04:09:21) [Added February 1999].</p>	<p>Verify that construction does not begin until the Department has determined that the system has adequate capacity.</p> <p>Verify that a new water system does not provide water to its consumers until a certificate of approval has been issued for the system.</p> <p>Verify that facility plan and operations and maintenance manuals are prepared by a qualified engineers.</p> <p>Verify that the operations and maintenance manual is signed, dated, and the imprinted with the seal of registration.</p>
<p>WQ.35.2.SD. A new water system must have an operations and maintenance manual (SDAR 74:04:09:09) [Added February 1999].</p>	<p>Verify that the operations and maintenance manual is submitted to the Department before system start-up.</p> <p>Verify that at least one copy of the manual is kept on the water system premises and at least one manual is kept with all other water system records.</p> <p>Verify that the operations and maintenance manual is reviewed and updated as necessary to reflect changes in the operation or maintenance of the water system.</p> <p>Verify that the manual contains the following information:</p> <ul style="list-style-type: none"> - a description of the facilities - an explanation of start-up and normal operation procedures - a routine maintenance program - records and reporting system - sampling and analyses program - staffing and training requirements - identification of pollution sources at the water supply - safety program - a plan for tracking unaccounted-for water is developed and implemented - emergency plan and operating procedures - manufacturer's manuals.

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>COMMUNITY WATER SYSTEMS</p> <p>WQ.40 Monitoring/Sampling</p> <p>WQ.40.1.SD. [Deleted February 2005]. (NOTE: SDAR 74:04:05:04.03 repealed.)</p> <p>WQ.40.2.SD. [Deleted February 2005]. (NOTE: SDAR 74:04:05:04.03 repealed.)</p> <p>WQ.40.3.SD. [Deleted February 2005]. (NOTE: SDAR 74:04:05:04.05 repealed.)</p> <p>WQ.40.4.SD. [Deleted February 2004]. (NOTE: Equivalent to Federal requirements.)</p> <p>WQ.40.5.SD. [Deleted February 2005]. (NOTE: SDAR 74:04:05:04.34 repealed.)</p> <p>WQ.40.6.SD. [Deleted March 2003]. (NOTE: Regulation revised; see WQ.15.12.SD.)</p>	

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>COMMUNITY WATER SYSTEMS</p> <p>WQ.45. Notification and Reporting Requirements</p> <p>WQ.45.1.SD. [Deleted February 2005].</p> <p>WQ.45.2.SD. [Deleted February 2005].</p>	<p>(NOTE: SDAR 74:04:05:27(4) repealed.)</p> <p>(NOTE: SDAR 74:04:10:14 repealed.)</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>NONCOMMUNITY WATER SYSTEMS</p> <p>WQ.65. Monitoring/Sampling</p> <p>WQ.65.1.SD. [Deleted February 2005]. (NOTE: 74:04:05:04.03(4) repealed.)</p> <p>WQ.65.2.SD. [Deleted February 2005]. (NOTE: 74:04:05:04.05 repealed.)</p> <p>WQ.65.3.SD. [Deleted February 2005]. (NOTE: 74:04:05:04.05 repealed.)</p> <p>WQ.65.4.SD. [Deleted March 2003]. (NOTE: Regulation revised; see WQ.15.12.SD.)</p>	

**COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement**

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>NONCOMMUNITY WATER SYSTEMS</p> <p>WQ.70. Lead and Copper</p> <p>WQ.70.1.SD. [Deleted February 2005].</p>	(NOTE: SDAR 74:04:05:90 repealed.)

**COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement**

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>NONCOMMUNITY WATER SYSTEMS</p> <p>WQ.75. Notification and Reporting Requirements</p> <p>WQ.75.1.SD. [Deleted February 2005].</p>	(NOTE: SDAR 74:04:06:37 repealed.)

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>NONTRANSIENT NONCOMMUNITY WATER SYSTEMS</p> <p>WQ.76. Standards</p> <p>WQ.76.1.SD. A new water system must have approval prior to construction and prior to providing water (SDAR 74:04:09:04, 74:04:09:10, 74:04:09:15, and 74:04:09:21) [Added February 1999].</p>	<p>Verify that construction does not begin until the Department has determined that the system has adequate capacity.</p> <p>Verify that a new water system does not provide water to its consumers until a certificate of approval has been issued for the system.</p> <p>Verify that facility plan and operations and maintenance manuals are prepared by a qualified engineer.</p> <p>Verify that the operations and maintenance manual is signed, dated, and the imprinted with the seal of registration.</p> <p>(NOTE: A new water system is a system that will become a community water system or NTNC on or after 1 October 1999. Any system that has infrastructure in place before 1 October 1999, and then becomes a new water system by the addition of new users is not required to obtain a certificate of approval. (WQ.76.1.SD and WQ.76.2.SD are repeated in WQ.35.1.SD. and WQ. 35.2.SD.) (74:04:09:02))</p>
<p>WQ.76.2.SD. A new water system must have an operations and maintenance manual (SDAR 74:04:09:09) [Added February 1999].</p>	<p>Verify that the operations and maintenance manual is submitted to the Department before system start-up.</p> <p>Verify that at least one copy of the manual is kept on the water system premises and at least one manual is kept with all other water system records.</p> <p>Verify that the operations and maintenance manual is reviewed and updated as necessary to reflect changes in the operation or maintenance of the water system.</p> <p>Verify that the manual contains the following information:</p> <ul style="list-style-type: none"> - a description of the facilities - an explanation of start-up and normal operation procedures - a routine maintenance program - records and reporting system - sampling and analyses program - staffing and training requirements - identification of pollution sources at the water supply - safety program - a plan for tracking unaccounted-for water is developed and implemented - emergency plan and operating procedures

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<ul style="list-style-type: none"> - manufacturer's manuals. <p>(NOTE: A new water system is a system that will become a community water system or NTNC on or after 1 October 1999. Any system that has infrastructure in place before 1 October 1999, and then becomes a new water system by the addition of new users is not required to obtain a certificate of approval. (WQ.76.1.SD and WQ.76.2.SD are repeated in WQ.35.1.SD. and WQ.35.2.SD.) (74:04:09:02))</p>

COMPLIANCE CATEGORY: WATER QUALITY MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WQ.90.</p> <p>DRINKING WATER WELLS</p> <p>WQ.90.1.SD. All wells must meet construction standards (SDAR 74:02:04:22, 74:02:04:23.01 and 74:02:04:20(6)) [Added February 2002; Revised February 2005; Revised February 2007].</p>	<p>(NOTE: This checklist applies to all wells constructed, rehabilitated, or rebuilt after 16 July 1992.)</p> <p>Verify that, except for monitoring wells, all wells are constructed to comply with the definition of an adequate well:</p> <ul style="list-style-type: none"> - constructed or rehabilitated to allow various withdrawal methods to be used - to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed - to allow the pump to be placed as near to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet.
<p>WQ.90.2.SD. Wells must meet location standards (SDAR 74:02:04:24) [Added February 2002].</p>	<p>(NOTE: See WQ.90.1.SD. for applicability.)</p> <p>Verify that, except for monitoring wells installed to assess the extent of contamination, all wells are located as follows:</p> <ul style="list-style-type: none"> - wells supplied by aquifers whose top is less than 100 feet deep are located no closer than 150 feet horizontally from a pollution source, 75 feet horizontally from wastewater system components, or 30 feet horizontally from sewer lines - wells supplied by aquifers whose top is more than 100 feet deep are located no closer than 100 feet horizontally from a pollution source, 50 feet horizontally from wastewater system components, or 30 feet horizontally from sewer lines - wells constructed to supply water to water distribution systems are located no closer than: <ul style="list-style-type: none"> - 500 ft horizontally from a wastewater treatment plant, wastewater pumping station, hazardous chemical warehouse, bulk petroleum storage facility, bulk fertilizer storage facility, or bulk pesticide storage facility - 1000 ft horizontally from a sanitary landfill or dump, wastewater drainage ditch, or wastewater stabilization pond - all wells are located a minimum of 10 feet horizontally from permanent structures and overhead projections of the structure and 10 feet horizontally from overhead power lines. <p>(NOTE: Small removable structures or pump houses with roof access may be built over a well.)</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
WQ.90.3.SD. Wells must be accessible (SDAR 74:02:04:25) [Added February 2002].	(NOTE: See WQ.90.1.SD. for applicability.) Verify that wells are easily accessible for cleaning, repair, disinfection, acidizing, and inspection.
WQ.90.4.SD. Wells located below the ground surface are prohibited (SDAR 74:02:04:27) [Added February 2002; Revised February 2004].	(NOTE: See WQ.90.1.SD. for applicability.) Verify that the top of the well casing does not terminate in a pit, room, or space that is located below the established ground surface. Verify that the top of the well casing or pitless adapter barrel, excluding the well cap or the pitless unit or pitless adapter cap, terminates at least 12 inches above the ground surface or pumphouse floor and at least 24 inches above the high-water level where flooding occurs. (NOTE: A pitless unit or pitless adapter with an underground discharge may be used.) Verify that positive surface drainage is provided in all directions away from the well, with a slope of at least one-fourth inch per foot for a distance of at least 10 feet. Verify that the well is located at least 10 feet from a pit, room, and other below-ground surface space used to locate a pressure tank, pump, and well control equipment. Verify that, when existing wells located in pits are rehabilitated, the pit is eliminated.
WQ.90.5.SD. Wells producing from more than one aquifer are prohibited (SDAR 74:02:04:34.01) [Added February 2002].	(NOTE: See WQ.90.1.SD. for applicability.) Verify that no well is constructed to allow production from more than one aquifer unless approved by the chief engineer or the water management board.
WQ.90.6.SD. Constructed, rehabilitated or rebuilt wells must meet disinfection requirements (SDAR 74:02:04:58.01) [Added February 2002].	(NOTE: See WQ.90.1.SD. for applicability.) Verify that any water supply well constructed, rehabilitated, or rebuilt is disinfected with chlorine in a manner outlined in the "Recommended Procedure for Chlorine Disinfection of Water Wells." (NOTE: Best management practices should be taken to reduce the potential of

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
WQ.90.7.SD. Wells in road ditches must be protected (SDAR 74:02:04:59) [Added February 2002].	<p>chlorinated water reaching surface waters.)</p> <p>(NOTE: See WQ.90.1.SD. for applicability.)</p> <p>Verify that observation wells located in road ditches are protected by installing a minimum of 2 steel posts around the well.</p>
WQ.90.8.SD. Large capacity pumped wells must be provided with backflow prevention (SDAR 74:02:04:62) [Added February 2002].	<p>(NOTE: See WQ.90.1.SD. for applicability.)</p> <p>Verify that all large capacity pumped wells are provided with check valves or other approved backflow preventer devices to protect the well from backflow or backsiphonage.</p>
WQ.90.9.SD. Public water supply wells and wells for domestic use must undergo water analysis upon completion (SDAR 74:02:04:63) [Added February 2002].	<p>(NOTE: See WQ.90.1.SD. for applicability.)</p> <p>Verify that, following completion of any public water supply well or any well for domestic use, a water quality sample is collected and submitted to the Department of Health Laboratory or another laboratory approved by the Division of Environmental Regulation, Department of Environment and Natural Resources.</p> <p>Verify that the completed analysis is submitted to the Division of Environmental Regulation, Office of Drinking Water, Department of Environment and Natural Resources, by the well driller or the owner within 30 days after the submittal of the well completion report.</p> <p>Verify that, at a minimum, the water sample is analyzed for nitrate, coliform bacteria, sodium, conductivity, and sulfate.</p> <p>(NOTE: Other parameters may be analyzed for at the option of the well owner or driller.)</p>
WQ.90.10.SD. Test holes and abandoned wells must meet plugging requirements (SDAR 74:02:04:67, 74:02:04:69, through 74:02:04:70.01) [Added February 2002].	<p>(NOTE: See WQ.90.1.SD. for applicability.)</p> <p>Verify that all abandoned or forfeited wells or test holes that are completed into confined aquifers or that encounter more than one aquifer are either:</p> <ul style="list-style-type: none"> - plugged with bentonite grout if the weight of the bentonite grout column is sufficient to overcome the bottom hole pressure - plugged with cement grout placed from the bottom of the well or hole to within 8 feet of the ground surface.

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WQ.90.11.SD. Well construction and rehabilitation must meet specific requirements (SDAR 74:02:04:21, 74:02:04:65, and 74:02:04:66) [Added February 2004].</p>	<p>Verify that wells completed into unconfined aquifers, provided only one aquifer is encountered, are backfilled with clean sand or gravel to the top of the aquifer (at a minimum).</p> <p>Verify that test holes that encounter no water or only low-permeability formations such as clays, shales, and till are backfilled to restore natural conditions as nearly as possible.</p> <p>(NOTE: If verification can be provided that a well was constructed in accordance with this chapter, a well removed from service and not permanently abandoned may be temporarily abandoned by sealing the top with a watertight cap.)</p> <p>(NOTE: See WQ.90.1.SD. for applicability.)</p> <p>Verify that, before drilling a well, a water permit is obtained.</p> <p>Verify that a record of water well construction or rehabilitation is furnished by the driller to the chief engineer and to the well owner.</p> <p>(NOTE: State agencies that construct wells or drill test holes with state-owned equipment may retain their records.)</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WQ.100.</p> <p>MISCELLANEOUS WELLS</p> <p>WQ.100.1.SD. All wells must meet construction standards (SDAR 74:02:04:22, 74:02:04:23.01 and 74:02:04:20(6)) [Added February 2004; Revised February 2005; Revised February 2007].</p>	<p>(NOTE: This checklist applies to all wells constructed, rehabilitated, or rebuilt after 16 July 1992.)</p> <p>Verify that, except for monitoring wells, all wells are constructed to comply with the definition of an adequate well:</p> <ul style="list-style-type: none"> - constructed or rehabilitated to allow various withdrawal methods to be used - to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed - to allow the pump to be placed as near to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet.
<p>WQ.100.2.SD. Wells must meet location standards (SDAR 74:02:04:24) [Added February 2004].</p>	<p>(NOTE: See WQ.100.2.SD. for applicability.)</p> <p>Verify that, except for monitoring wells installed to assess the extent of contamination, all wells are located as follows:</p> <ul style="list-style-type: none"> - wells supplied by aquifers whose top is less than 100 feet deep are located no closer than 150 feet horizontally from a pollution source, 75 feet horizontally from wastewater system components, or 30 feet horizontally from sewer lines - wells supplied by aquifers whose top is more than 100 feet deep are located no closer than 100 feet horizontally from a pollution source, 50 feet horizontally from wastewater system components, or 30 feet horizontally from sewer lines - all wells are located a minimum of 10 feet horizontally from permanent structures and overhead projections of the structure and 10 feet horizontally from overhead power lines. <p>(NOTE: Small removable structures or pump houses with roof access may be built over a well.)</p>
<p>WQ.100.3.SD. Wells must be accessible (SDAR 74:02:04:25) [Added February 2004].</p>	<p>(NOTE: See WQ.100.2.SD. for applicability.)</p> <p>Verify that wells are easily accessible for cleaning, repair, disinfection, acidizing, and inspection.</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WQ.100.4.SD. Wells located below the ground surface are prohibited (SDAR 74:02:04:27) [Added February 2004].</p>	<p>(NOTE: See WQ.100.2.SD. for applicability.)</p> <p>Verify that the top of the well casing does not terminate in a pit, room, or space that is located below the established ground surface.</p> <p>Verify that the top of the well casing or pitless adapter barrel, excluding the well cap or the pitless unit or pitless adapter cap, terminates at least 12 inches above the ground surface or pumphouse floor and at least 24 inches above the high-water level where flooding occurs.</p> <p>(NOTE: A pitless unit or pitless adapter with an underground discharge may be used.)</p> <p>Verify that positive surface drainage is provided in all directions away from the well, with a slope of at least one-fourth inch per foot for a distance of at least 10 feet.</p> <p>Verify that the well is located at least 10 feet from a pit, room, and other below-ground surface space used to locate a pressure tank, pump, and well control equipment.</p> <p>Verify that, when existing wells located in pits are rehabilitated, the pit is eliminated.</p>
<p>WQ.100.5.SD. Wells producing from more than one aquifer are prohibited (SDAR 74:02:04:34.01) [Added February 2004].</p>	<p>(NOTE: See WQ.100.2.SD. for applicability.)</p> <p>Verify that no well is constructed to allow production from more than one aquifer unless approved by the chief engineer or the water management board.</p>
<p>WQ.100.6.SD. Wells in road ditches must be protected (SDAR 74:02:04:59) [Added February 2004].</p>	<p>(NOTE: See WQ.100.2.SD. for applicability.)</p> <p>Verify that observation wells located in road ditches are protected by installing a minimum of 2 steel posts around the well.</p>
<p>WQ.100.7.SD. Large capacity pumped wells must be provided with backflow prevention (SDAR 74:02:04:62) [Added February 2004].</p>	<p>(NOTE: See WQ.100.2.SD. for applicability.)</p> <p>Verify that all large capacity pumped wells are provided with check valves or other approved backflow preventer devices to protect the well from backflow or backsiphonage.</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WQ.100.8.SD. Test holes and abandoned wells must meet plugging requirements (SDAR 74:02:04:67, 74:02:04:69 through 74:02:04:70.01) [Added February 2004; Citation Revised February 2007].</p>	<p>(NOTE: See WQ.100.2.SD. for applicability.)</p> <p>Verify that all abandoned or forfeited wells or test holes that are completed into confined aquifers or that encounter more than one aquifer are either:</p> <ul style="list-style-type: none"> - plugged with bentonite grout if the weight of the bentonite grout column is sufficient to overcome the bottom hole pressure - plugged with cement grout placed from the bottom of the well or hole to within 8 feet of the ground surface. <p>Verify that wells completed into unconfined aquifers, provided only one aquifer is encountered, are backfilled with clean sand or gravel to the top of the aquifer (at a minimum).</p> <p>Verify that test holes that encounter no water or only low-permeability formations such as clays, shales, and till are backfilled to restore natural conditions as nearly as possible.</p> <p>(NOTE: If verification can be provided that a well was constructed in accordance with this chapter, a well removed from service and not permanently abandoned may be temporarily abandoned by sealing the top with a watertight cap.)</p>
<p>WQ.100.9.SD. Well construction and rehabilitation must meet specific requirements (SDAR 74:02:04:21, 74:02:04:65, and 74:02:04:66) [Added February 2004].</p>	<p>(NOTE: See WQ.100.2.SD. for applicability.)</p> <p>Verify that, before drilling a well, a water permit is obtained.</p> <p>Verify that a record of water well construction is furnished by the driller to the chief engineer and to the well owner.</p> <p>(NOTE: State agencies that construct wells or drill test holes with state-owned equipment may retain their records.)</p> <p>Verify that a record of water well rehabilitation is furnished by the driller to the chief engineer and to the well owner.</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>UNDERGROUND INJECTION CONTROL (UIC)</p> <p>WQ.110. Class I Wells</p> <p>WQ.110.1.SD. Class I disposal wells are prohibited (SDAR 74:55:02:02) [Revised February 2004; Citation Revised February 2007].</p> <p>WQ.110.2.SD. [Moved February 2004].</p>	<p>Verify that the facility does not have or allow injection through a well that can be defined as Class I.</p> <p>(NOTE: Moved to WQ.114.1.SD.; February 2004.)</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>UNDERGROUND INJECTION CONTROL (UIC)</p> <p>WQ.113. Class IV Wells</p> <p>WQ.113.1.SD. Class IV disposal wells are prohibited (SDAR 74:55:02:02) [Added February 2004; Citation Revised February 2007].</p>	<p>Verify that the facility does not have or allow injection through a well that can be defined as Class IV.</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>UNDERGROUND INJECTION CONTROL (UIC)</p> <p>WQ.114. Class V Wells</p> <p>WQ.114.1.SD. Owner/operators of Class V wells must meet notification requirements (SDAR 74:55:02:04) [Citation Revised February 2007].</p>	<p>(NOTE: Moved here from WQ.110.2.SD.; February 2004.)</p> <p>Verify that the owner or operator of a Class V well notifies the Secretary within 30 days of completion, of the existence of any well meeting the definitions of Class V under his control and submits the inventory information on forms provided by the Secretary.</p>

COMPLIANCE CATEGORY: WATER QUALITY MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
WQ.115. WATER QUALITY STANDARDS <p>WQ.115.1.SD. Facilities must maintain and protect the existing and future beneficial uses of groundwater (SDAR 74:54:01:03) [Citation Revised February 2005; Citation Revised February 2007; Revised February 2010].</p>	<p>Verify that waters of the state with ambient water quality better than the minimum levels prescribed are maintained and protected at the better water quality.</p> <p>Verify that groundwater that has an ambient concentration of 10,000 mg/L or less TDS is classified as having the beneficial use of drinking water supplies, suitable for human consumption.</p> <p>(NOTE: If the ambient concentration of any water contaminant in the groundwater is in conformance with the standards, degradation of the groundwater to the limit of the standards may be permitted to accommodate necessary economic or social development upon approval of a water quality variance permit.)</p> <p>Verify that water quality standards are not violated and designated beneficial uses are not impaired by granting of a variance permit allowing degradation of groundwater quality.</p> <p>(NOTE: If the groundwater quality does not meet the standards as a result of natural causes or conditions, no degradation of the groundwater beyond the ambient concentration may be allowed.)</p> <p>(NOTE: See WA.5.SD. for broad discharge prohibitions.)</p>
<p>WQ.115.2.SD. Facilities must meet the standards for TDS concentrations in groundwater (SDAR 74:54:01:04) [Revised February 2005].</p>	<p>Verify that the standards for allowable pH range and maximum allowable concentrations in groundwater of 10,000 mg/L concentration or less for the contaminants specified in Appendix 13-4 are met unless the ambient condition exceeds the standards.</p> <p>(NOTE: Regardless of whether there is one contaminant or more than one contaminant present in groundwater, when the ambient pH or concentration of any water contaminant exceeds the standards specified in the section, the ambient pH or concentration is the allowable limit, provided that the discharge at such concentrations will not result for the present or the reasonably foreseeable future in concentrations of groundwater withdrawal in excess of the standards in this section.)</p> <p>(NOTE: These standards apply to the dissolved portion of the contaminants specified, with the exception of mercury and the organic compounds, using the definitions of dissolved given in the publication <i>Methods for Chemical Analysis of Water and Wastes</i>, Version 2, June 1999). The standards for mercury and the organic compounds apply to the total unfiltered counteractions of the</p>

COMPLIANCE CATEGORY: WATER QUALITY MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WQ.115.3.SD. Groundwater must not contain potential toxic pollutants (SDAR 74:54:01:05) [Revised February 2005].</p>	<p>contaminants.)</p> <p>Verify that groundwater does not contain potential toxic pollutants.</p> <p>Verify that potential toxic pollutants, other than those listed in Appendix 13-4, are nondetectable in groundwater at detection limits of the currently acceptable sampling and analytical techniques as approved by the secretary until a maximum contaminant level (MCL) or health advisory level is set by the EPA.</p>
<p>WQ.115.4.SD. Facilities must use certain sampling and analytical techniques and quality assurance plans unless otherwise specified by the Secretary (SDAR 74:54:01:06) [Revised February 2005].</p>	<p>Verify that sampling and analytical techniques and quality assurance plans conform with the following references unless otherwise specified by the Secretary:</p> <ul style="list-style-type: none"> - Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998 - Methods and Guidance for the Analysis of Water, Version 2, June 1999 - Techniques of Water Resource Investigation of the U. S. Geological Survey, (1982) - The sampling and analytical requirements published in 67 FR 65896 - 65901 (October 29, 2002), 68 FR 14505 - 14507 (March 25, 2003), 67 FR 65246 - 65250 (October 23, 2002), (references to be codified at 40 C.F.R. Parts 141; National Primary Drinking Water Regulations) and 52 FR 25947 (July 9, 1987) and 62 FR 32462 (June 13, 1997), (to be codified at 40 C.F.R. Parts 264, Appendix IX) - National Field Manual for the Collection of Water-Quality Data", book 9, chaps. A1-A9 October 1997 to April 2004.
<p>WQ.115.5.SD. Facilities with outstanding state resource waters must protect and maintain them (SDAR 74:51:01:39) [Revised April 1998; Citation Revised February 2005].</p>	<p>Determine whether facilities have surface waters of the state that are of high quality or are of exceptional recreational or ecological significance and designated by the Board as outstanding state resource waters.</p> <p>Verify that, if high quality waters constitute an outstanding state resource water, that water quality is maintained and protected.</p>
<p>WQ.115.6.SD. Surface water must meet specific water quality criteria (SDAR 74:51:01:02 and 74:51:01:41) [Citation Revised February 2005; Revised February</p>	<p>Verify that the facility does not cause or allow any discharge into surface waters of the state pollutants which cause the receiving water to fail to meet the criteria for its designated beneficial use or uses.</p> <p>(NOTE: See Appendix 13-6 for water quality criteria and 74:51:01 Appendix B for Toxic Pollutant Criteria.)</p>

COMPLIANCE CATEGORY: WATER QUALITY MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
2010].	<p>Verify that compliance with chronic criteria or criteria continuous concentration (CCC) is based on the results of a 30-day average.</p> <p>Verify that compliance with acute criteria or criteria maximum concentration (CMC) is based on the results of any one grab sample.</p> <p>WQ.115.7.SD. Facilities must protect wetlands as surface waters of the state (SDAR 74:51:01:11) [Revised April 1998].</p> <p>Verify that facilities protect wetlands as surface waters of the state.</p> <p>Verify that facilities with discharges of pollutants from any source, including indiscriminate use of fill material, do not cause destruction or impairment of wetlands except when authorized under the <i>Federal Water Pollution Control Act</i> as amended 4 February 1987, or under 40 CFR Parts 257 and 258, Solid Waste Disposal Facility Criteria; Final Rule, as amended 1 July 1996.</p> <p>WQ.115.8.SD. Facilities must maintain and protect the biological integrity of surface waters of the state (SDAR 74:51:01:12) [Citation Revised February 2005].</p> <p>Verify that facilities maintain and protect surface waters of the state, keeping them free from substances, whether attributable to human-induced point source discharges or nonpoint source activities, in concentrations or combinations which will adversely impact the structure and function of indigenous or intentionally introduced aquatic communities.</p> <p>WQ.115.9.SD. Toxicity of pollutants to aquatic life must be based on bioassay (SDAR 74:51:01:23) [Revised April 1998; Revised February 2005; Revised February 2010].</p> <p>Verify that toxicity to aquatic life is based on bioassays which determine concentrations of a substance which at a defined period of exposure are toxic to aquatic life.</p> <p>Verify that toxicity test simulate expected receiving water conditions and are conducted according to test procedures approved or methods given in the references listed in 40 CFR part 136 (1 July, 2008), guidelines for establishing test procedures for the analysis of pollutants.</p> <p>(NOTE: The term acute means a stimulus severe enough to rapidly induce an effect. In aquatic toxicity tests, a deleterious response (e.g., mortality, disorientation, immobilization) to a stimulus observed in 96 hours or less is considered acute. When referring to aquatic toxicology or human health, an acute effect is not always measured in terms of lethality.)</p> <p>(NOTE: The term chronic means a stimulus of the lowest concentration of a constituent causing observable effects. In aquatic toxicity tests, observable effects may include lethality, reduced growth, or reduced reproduction, usually a four- to seven-day test.)</p> <p>WQ.115.10.SD. Average</p> <p>Verify that the average dissolved concentrations, including the naturally occurring</p>

COMPLIANCE CATEGORY: WATER QUALITY MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
dissolved concentrations for radionuclides must not be exceeded (SDAR 74:51:01:14 and 74:51:01:18) [Revised February 2005].	or background concentrations, do not exceed the following levels for the substance listed: <ul style="list-style-type: none"> - iodine-131: 5 pCi/L - radium-226: 5 pCi/L - strontium-89: 100 pCi/L - strontium-90: 10 pCi/L - tritium: 300 pCi/L. <p>Verify that, for all radionuclides not listed in WQ.115.10.SD., the average dissolved concentration limits in surface waters of the state are 1/150 of the corresponding maximum permissible concentration in water for continuous occupational exposure for a 168-hour week as contained in pages 24 to 91, inclusive, of Handbook 69.</p> <p>(REFERENCE: Handbook 69, <i>Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure</i>, issued 5 June 1959, amended August 1963, AFP 160-6-7, 101 pages, U. S. Department of Commerce, National Bureau of Standards.)</p>
WQ.115.11.SD. Concentration levels for suspended radionuclides must not be exceeded (SDAR 74:51:01:15) [Citation Revised February 2005].	Verify that the average concentration levels for radionuclides associated with suspended materials in the water are 1/150 of the corresponding maximum permissible concentration in water (insoluble form) for continuous occupational exposure for a 168-h week as contained in pages 24 to 91 of Handbook 69.
WQ.115.12.SD. Maximum concentrations for radionuclides must not be exceeded (SDAR 74:51:01:19) [Citation Revised February 2005].	Verify that in-stream sedimentation of material is not producing solids beds that, because of leaching, cause noncompliance with radionuclide concentration limits.
WQ.115.13.SD. Average concentrations of radionuclides must be computed according to specific requirements (SDAR 74:51:01:20) [Citation Revised February 2005].	Verify that the maximum concentration for any one sample has not exceeded 3 times the specified average concentration limits of radionuclides.
	Verify that average concentrations of radionuclides have been computed from monitoring data acquired during the previous 10 mo and reported as a rolling average.

COMPLIANCE CATEGORY: WATER QUALITY MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WQ.115.14.SD. Discharges to lakes must meet specific standards (SDAR 74:51:01:27) [Citation Revised April 1998].</p>	<p>Verify that lake discharges meet the water quality standards at the point of discharge. (NOTE: Mixing zones are prohibited for lakes.)</p> <p>Verify that no discharge of pollutants is allowed which reaches a lake classified for the beneficial use of fish life propagation or causes impairment of an assigned beneficial use.</p>
<p>WQ.115.15.SD. The total dissolved gas pressure of receiving waters protected as coldwater fisheries is regulated (SDAR 74:51:01:13) [Citation Revised February 2005].</p>	<p>Verify that discharges from impoundments or other sources into waters protected as coldwater fisheries do not cause the total dissolved gas pressure to exceed 110 percent of the saturation value.</p>
<p>WQ.115.16.SD. Point source discharges and non-point source discharges must not impact the structure and function of indigenous or intentionally introduced aquatic communities (SDAR 74:51:01:12) [Added February 2005].</p>	<p>Verify that all waters of the state are free from substances, whether attributable to human-induced point source discharges or nonpoint source activities, in concentrations or combinations which will adversely impact the structure and function of indigenous or intentionally introduced aquatic communities.</p>
<p>WQ.115.17.SD. Discharges that produce visible pollution to surface waters are prohibited (SDAR 74:51:01:06 and 74:51:01:10) [Added February 2005].</p>	<p>Verify that a discharge of insoluble materials of petroleum derivation that imparts a visible film or sheen to the surface of the water or the adjoining shorelines is prohibited.</p> <p>Verify that raw or treated sewage, garbage, rubble, unpermitted fill materials, municipal wastes, industrial wastes, or agricultural wastes which produce floating solids, scum, oil slicks, material discoloration, visible gassing, sludge deposits, sediments, slimes, algal blooms, fungus growths, or other offensive effects are not discharged or caused to be discharged into surface waters of the state.</p>
<p>WQ.115.18.SD. Materials that produce nuisance aquatic life to surface water are</p>	<p>Verify that materials which produce nuisance aquatic life are not discharged or caused to be discharged into surface waters of the state in concentrations that</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>prohibited (SDAR 74:51:01:09) [Added February 2005].</p> <p>WQ.115.19.SD. Materials that impart undesirable tastes or undesirable odors to the receiving water are prohibited (SDAR 74:51:01:08) [Added February 2005].</p> <p>WQ.115.20.SD. Discharged materials that affect the pH of the receiving waters by more than 0.5 pH units or induce temperature change over spawning beds are prohibited (SDAR 74:51:01:07 and 74:51:01:31) [Added February 2005; Revised February 2007].</p> <p>WQ.115.21.SD. Public beaches must meet water quality standards and reporting requirements (SDAR 74:04:08:07 and 74:04:08:08) [Added February 2005].</p>	<p>impair an existing or designated beneficial use or create a human health problem.</p> <p>Verify that materials which will impart undesirable tastes or undesirable odors to the receiving water are not discharged or caused to be discharged into surface waters of the state in concentrations that impair a beneficial use.</p> <p>Verify that no materials is discharged or caused to be discharged that affect the pH of the receiving waters by more than 0.5 pH unit. <small>(NOTE: This does not apply to pH fluctuations of more than 0.5 pH unit contributable to natural influences.)</small></p> <p>Verify that induced temperature changes do not occur over spawning beds.</p> <p>Verify that discharges do not affect the temperature by more than 4°F in streams classified for the beneficial use of coldwater permanent, coldwater marginal, or warmwater permanent fish life propagation.</p> <p>Verify that discharges do not affect the temperature by more than 5°F in streams classified for the beneficial use of warmwater semipermanent or warmwater marginal fish life propagation.</p> <p>Verify that discharges do not affect the temperature by more than 3°F in lakes or impoundments classified for the beneficial use of fish life propagation.</p> <p>Verify that the maximum incremental temperature does not exceed 2°F per hour. <small>(NOTE: Exceptions may be granted by the board if the discharge will not impair the designated beneficial use of fish life propagation.)</small></p> <p>Verify that public beaches submit one microbiological sample per week of operation to determine fecal coliform bacteria levels.</p> <p>Verify that this sample is analyzed by a laboratory approved or certified for fecal coliform testing. <small>(NOTE: A public beach is out of compliance if:</small> <ul style="list-style-type: none"> - any 2 consecutive samples exceed 300 fecal coliform per 100 milliliters - any 3 consecutive samples exceed 200 fecal coliform per 100 milliliters or </p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<ul style="list-style-type: none"> - any single sample exceeds 1,000 fecal coliform per 100 milliliters.) <p>Verify that, if the public beach fails to meet water quality standards as specified, it is immediately closed.</p> <p>Verify that Signs stating <i>Beach Closed -- Unsafe for Swimming</i> are posted until the bacteriological levels are met.</p> <p>Verify that all public beaches report results of bacteriological testing to the department within 10 days after receiving the results.</p> <p>(NOTE: A public beach does not have to report results to the department if the laboratory sends the results directly to the department.)</p>

COMPLIANCE CATEGORY:
WATER QUALITY MANAGEMENT
South Dakota Supplement

REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
<p>WQ.150.</p> <p>SWIMMING POOLS</p> <p>WQ.150.1.SD. Swimming pools must meet water quality standards and reporting requirements (SDAR 74:04:08:06 and 74:04:08:08) [Added February 2005].</p>	<p>Verify that municipal swimming pool owners submit one microbiological sample per week of operation to determine total coliform bacteria levels.</p> <p>Verify that this sample is analyzed by a laboratory approved or certified for total coliform testing.</p> <p>(NOTE: The swimming pool is out of compliance if:</p> <ul style="list-style-type: none"> - any 2 consecutive samples are positive for total coliform bacteria - any 2 consecutive samples are positive for pseudomonas aeruginosa - any combination of the above.) <p>Verify that the water is clear enough at all times so that a black disc, 6 inches in diameter (or a red and black disc, 2 1/2 inches in diameter) is readily visible in the deepest portion of the facility.</p> <p>Verify that, if the swimming pool fails to meet bacteriological and clarity standards as specified, it is immediately closed.</p> <p>(NOTE: The swimming pool may reopen when the bacteriological and clarity standards specified in this section are met.)</p> <p>Verify that all municipal swimming pools report results of bacteriological testing to the department within 10 days after receiving the results.</p> <p>(NOTE: A municipal swimming pool does not have to report results to the department if the laboratory sends the results directly to the department.)</p>
<p>WQ.150.2.SD. Public beaches must meet water quality standards and reporting requirements (SDAR 74:04:08:07 and 74:04:08:08) [Added February 2005].</p>	<p>Verify that public beaches submit one microbiological sample per week of operation to determine fecal coliform bacteria levels.</p> <p>Verify that this sample is analyzed by a laboratory approved or certified for fecal coliform testing.</p> <p>(NOTE: A public beach is out of compliance if:</p> <ul style="list-style-type: none"> - any 2 consecutive samples exceed 300 fecal coliform per 100 milliliters - any 3 consecutive samples exceed 200 fecal coliform per 100 milliliters or - any single sample exceeds 1,000 fecal coliform per 100 milliliters.) <p>Verify that, if the public beach fails to meet water quality standards as specified, it is immediately closed.</p> <p>Verify that Signs stating <i>Beach Closed -- Unsafe for Swimming</i> are posted until</p>

COMPLIANCE CATEGORY: WATER QUALITY MANAGEMENT South Dakota Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: February 2010
	<p>the bacteriological levels are met.</p> <p>Verify that all public beaches report results of bacteriological testing to the department within 10 days after receiving the results.</p> <p>(NOTE: A public beach does not have to report results to the department if the laboratory sends the results directly to the department.)</p>

Appendix 13-1

Maximum Contaminant Levels (MCLs) for Inorganic Chemicals

[Deleted February 2005]

(NOTE: SDAR 74:04:05:03 was repealed.)

Appendix 13-2

Maximum Contaminant Levels (MCLs) for Synthetic Organic Chemicals

[Deleted February 2004]

(NOTE: Equivalent to Federal requirements.)

Appendix 13-3

Unregulated Contaminant Monitoring [Deleted March 2003]

(NOTE: SDAR 74:04:05:40 was repealed)

Appendix 13-4

Human Health Standards

(Source: SDAR 74:54:01:04, Table 1 and Table 2) [Revised February 2005]

Contaminant	CAS Number	Concentration
ORGANICS		
Alachlor	15972-60-8	0.002 mg/L
Aldicarb	116-06-3	0.003 mg/L
Aldicarb Sulfone	1646-87-4	0.002 mg/L
Aldicarb Sulfoxide	1646-87-3	0.004 mg/L
Atrazine	1912-24-9	0.003 mg/L
Benzene	71-43-2	0.005 mg/L
Benzo[a]pyrene	50-32-8	0.0002 mg/L
Carbofuran	1563-66-2	0.04 mg/L
Carbon tetrachloride	56-23-5	0.005 mg/L
Chlordane	57-74-9	0.002 mg/L
2,4-D (2,4-dichlorophenoxyacetic acid)	94-75-7	0.07 mg/L
Dalapon (sodium salt)	75-99-0	0.2 mg/L
Di(2-ethylhexyl)adipate	103-23-1	0.4 mg/L
Di(2-ethylhexyl)phthalate	117-81-7	0.006 mg/L
Dibromochloropropane (DBCP)	96-12-8	0.0002 mg/L
o-Dichlorobenzene	95-50-1	0.6 mg/L
p-Dichlorobenzene	106-46-7	0.075 mg/L
1,2-Dichloroethane	107-06-2	0.005 mg/L
1,1-Dichloroethylene	75-35-4	0.007 mg/L
cis 1,2-Dichloroethylene	156-59-2	0.07 mg/L
trans 1,2-Dichloroethylene	156-60-5	0.1 mg/L
Dichloromethane (Methylene chloride)	75-09-2	0.005 mg/L
1,2-Dichloropropane	78-87-5	0.005 mg/L
Dinoseb	88-85-7	0.007 mg/L
Diquat	85-00-7	0.02 mg/L
Endothall	145-73-3	0.1 mg/L
Endrin	72-20-8	0.002 mg/L
Ethylbenzene	100-41-4	0.7 mg/L
Ethylene dibromide (EDB)	106-93-4	0.00005 mg/L
Glyphosate	1071-53-6	0.7 mg/L
Heptachlor	76-44-8	0.0004 mg/L
Heptachlor epoxide	1024-57-3	0.0002 mg/L
Hexachlorobenzene	188-74-1	0.001 mg/L
Hexachlorocyclopentadiene	77-47-4	0.05 mg/L
Total Haloacetic Acids, including:		
Dichloroacetic acid	76-43-6	
Monochloroacetic acid	79-11-8	0.06 mg/L
Trichloroacetic acid	76-03-9	
Lindane	58-89-9	0.0002 mg/L
Methoxychlor	72-43-5	0.04 mg/L

Contaminant	CAS Number	Concentration
Monochlorobenzene	108-90-7	0.1 mg/L
Oxamyl (Vydate)	23135-22-0	0.2 mg/L
Pentachlorophenol	87-86-5	0.001 mg/L
Picloram	2/1/1918	0.5 mg/L
Polychlorinated biphenyls (PCBs)	1336-36-3	0.0005 mg/L
Simazine	122-34-9	0.004 mg/L
Styrene	100-42-5	0.1 mg/L
2,3,7,8-TCDD (Dioxin)	1746-01-6	0.00000003 mg/L (3 x 10[-8] mg/L)
Tetrachloroethylene (PCE)	127-18-4	0.005 mg/L
Toluene	108-88-3	1 mg/L
Total petroleum hydrocarbons	NA	10 mg/L[1]
Toxaphene	8001-35-2	0.003 mg/L
2,4,5-TP Silvex	93-72-1	0.05 mg/L
1,2,4-Trichlorobenzene	120-82-1	0.07 mg/L
1,1,1-Trichloroethane	71-55-6	0.2 mg/L
1,1,2-Trichloroethane	79-00-5	0.005 mg/L
Total trihalomethanes, including:		
bromodichloromethane,	75-27-4	
bromoform (tribromomethane),	75-25-2	0.08 mg/L
chloroform (trichloromethane),	67-66-3	
dibromochloromethane (chlorodibromomethane)	124-4-1	
Trichloroethylene	79-01-6	0.005 mg/L
Vinyl chloride	75-01-4	0.002 mg/L
Xylenes (total)	1330-20-7	10 mg/L
INORGANICS		
Antimony	7440-36-0	0.006 mg/L
Arsenic	7440-38-2	0.01 mg/L[2]
Asbestos	1332-21-4	7 MFL (longer than 10 micrometers)
Barium	7440-39-3	2 mg/L
Beryllium	7440-41-7	0.004 mg/L
Bromate	7789-38-0	0.01 mg/L
Cadmium (Cd)	7440-43-9	0.005 mg/L
Chlorite	7758-19-2	1 mg/L
Chromium	7440-47-3	0.1 mg/L
Copper (Cu)	7440-50-8	1.0 mg/L
Cyanide (CN) as free cyanide	143-33-9	0.2 mg/L
Cyanine (CN) as weak acid dissociable	143-33-9	0.75 mg/L
Fluoride (F)	7681-49-4	4 mg/L
Lead (Pb)	7439-92-1	0.015 mg/L
Mercury (Hg)	7487-94-7	0.002 mg/L
Nitrate (as N)	14797-55-8	10 mg/L
Nitrite (as N)	14797-65-0	1 mg/L
Nitrate + Nitrite (both as N)	NA	10 mg/L
Selenium	7782-49-2	0.05 mg/L

Contaminant	CAS Number	Concentration
Silver	7440-22-4	0.1 mg/L
Thallium	7440-28-0	0.002 mg/L
Contaminant	CAS Number	Concentration
RADIONUCLIDES		
Beta particle and photon radioactivity (from man-made radionuclides)	NA	4 mrem/yr
Gross alpha particle activity,excluding radon and uranium	NA	15 pCi/l
Radium 226 & radium 228 combined	7440-14-4	5 pCi/l
Radon	10043-92-2	300 pCi/l
Uranium	7440-61-1	0.03 mg/L
MICROBIOLOGY		
Fecal coliform bacteria	NA	Less than 2.2 organisms per 100 mL (MPN)

{1} If Total Petroleum Hydrocarbons is between 0.1 mg/L and 10 mg/L, and is within the radius of influence of a well or within Zone A of a delineated wellhead protection area, clean up must continue until 0.1 mg/L is met. Total petroleum hydrocarbons must be analyzed using the California Department of Health Services Method published in "Leaking Underground Fuel Tank Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage

Tank Closure," October 1989, or its equivalent.

{2} Ground Water Discharge Plans with permitted allowable limits for arsenic issued before the effective date of these ground water quality standard revisions are exempt.

Table Two.

Other standards that are not applicable to groundwater receiving discharge from publicly owned treatment works.

Contaminant	CAS Number	Concentration
Chloride	7647-14-5	250 mg/L
pH	NA	6.5 - 8.5
Sulfate	7757-82-6	500 mg/L
TDS	NA	1000 mg/L

If the standards in either table one or table two are exceeded by ambient groundwater quality, the ambient water quality becomes the maximum allowable limit, as determined in § 74:54:02:18, for an approved groundwater discharge plan.

Appendix 13-5

Potential Toxic Pollutants

[Deleted February 2005]

Appendix 13-6

Water Quality Criteria for Specific Beneficial Uses

(Source: SDAR 74:51:01:44 through 74:51:01:54) [Revised April 1998;
Revised February 2005; Revised February 2010]

74:51:01:44. Criteria for Domestic Water Supply Waters.

The criteria of parameters for domestic water supply waters and their allowable variations that are not included under § 74:51:01:55 and Appendix B, unless set under § 74:51:01:24, are as found in the following table:

Parameter	Criteria	Unit of Measure	Special Conditions
Total dissolved solids	<= 1,000- <= 1,750	mg/L mg/L	30-day average daily maximum
Nitrates as N	<= 10	mg/L	daily maximum
pH	>= 6.5 - <= 9.0	units	
Total Coliform	<= 5,000	/100 mL	geometric mean of a minimum of 5 samples during separate 24-hour periods for a 30-day period and may not exceed this value in more than 20 percent of the samples examined in the same 30 day period
Barium	<= 20,000 <= 1.0	/100 mL mg/L	in any one sample
Chloride	<= 250 <= 438	mg/L mg/L	30-day average daily maximum
Fluoride	<= 4.0	mg/L	
Sulfate	<= 500 <= 875	mg/L mg/L	30-day average daily maximum
Total Petroleum Hydrocarbons	<= 1.0	mg/L	

74:51:01:45. Criteria For Coldwater Permanent Fish Life Propagation Waters

The criteria of parameters for coldwater permanent fish life propagation waters and their allowable variations that are not included under § 74:51:01:55 and Appendix B, unless set under § 74:51:01:24, are as found in the following table

Parameter	Criteria	Unit of Measure	Special Conditions
Total ammonia nitrogen as N	Equal to or less than the result from Equation 3 in Appendix A	mg/L	30-day average
	Equal to or less than the result from Equation 1 in Appendix A	mg/L	daily maximum
Chlorides	<= 100 <= 175 >= 6.0	mg/L mg/L mg/L	30-day average daily maximum daily minimum
Dissolved oxygen*	>= 7.0		in spawning areas during the spawning season
Undissociated hydrogen sulfide	<= 0.002	mg/L	Daily maximum
pH	>= 6.5 - <= 9.	units	see § 74:51:01:07
Total Suspended Solids	<= 30 <= 53	mg/L mg/L	30-day average daily maximum

Temperature	<= 65	°F	see 74:51:01:31 in WQ.115.20.SD.
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* as measured anywhere in the water column of a non-stratified water body, or in the epilimnion and metalimnion of a stratified water body

74:51:01:46. Criteria for Coldwater Marginal Fish Life Propagation Waters.

The criteria of parameters for coldwater marginal fish life propagation waters and their allowable variations that are not included under § 74:51:01:55 and Appendix B, unless set under § 74:51:01:24, are as found in the following table:

Parameter	Criteria	Unit of Measure	Special Conditions
Total ammonia nitrogen as N	Equal to or less than the result from Equation 3 in Appendix A*	mg/L	30-day average
Dissolved oxygen*	Equal to or less than the result from Equation 1 in Appendix A*	mg/L	daily maximum
Undisassociated hydrogen sulfide	>= 5.0	mg/L	Daily minimum
pH	<= 0.002	mg/L	daily maximum
Total Suspended Solids	>= 6.5 - <= 9.0	units	see 74:51:01:07 in WQ.115.20.SD.
Temperature	<= 90	mg/L	30-day average
	<= 158	mg/L	daily maximum
	<= 75	°F	see 74:51:01:31 in WQ.115.20.SD.

* as measured anywhere in the water column of a non-stratified water body, or in the epilimnion and metalimnion of a stratified water body

For special effluent limitations related to coldwater fisheries, see § 74:51:01:32.

74:51:01:47. Criteria for Warmwater Permanent Fish Life Propagation Waters.

The criteria of parameters for warmwater permanent fish life propagation waters and their allowable variations that are not included under § 74:51:01:55 and Appendix B, unless set under § 74:51:01:24, are as found in the following table:

Parameter	Criteria	Unit of Measure	Special Conditions
Total ammonia nitrogen as N	Equal to or less than the result from Equation 3 in Appendix A*	mg/L	30-day average March 1 - October 31
Dissolved oxygen*	Equal to or less than the result from Equation 4 in Appendix A*	mg/L	30-day average November 1 – February 29
Undisassociated hydrogen sulfide	Equal to or less than the result from Equation 2 in Appendix A*	mg/L	daily maximum
	>= 5.0	mg/L	daily minimum
	>= 6.0	mg/L	in Big Stone Lake and Lake Traverse during April and May
pH	<= 0.002	mg/L	daily maximum
Total Suspended Solids	>= 6.5 - <= 9.0	units	see § 74:51:01:07 in WQ.115.20.SD.
Temperature	<= 90	mg/L	30-day average
	<= 158	mg/L	daily maximum
	<= 80	°F	see § 74:51:01:31 in WQ.115.20.SD.

* as measured anywhere in the water column of a non-stratified water body, or in the epilimnion and metalimnion of a stratified water body

74:51:01:48. Criteria for Warmwater Semipermanent Fish Life Propagation Waters.

The criteria of parameters for warmwater semipermanent fish life propagation waters and their allowable variations that are not included under § 74:51:01:55 and Appendix B, unless set under § 74:51:01:24, are as found in the following table:

Parameter	Criteria	Unit of Measure	Special Conditions
Total ammonia nitrogen as N	Equal to or less than the result from Equation 3 in Appendix A*	mg/L	30-day average March 1 - October 31
	Equal to or less than the result from Equation 4 in Appendix A*	mg/L	30-day average November 1 – February 29
	Equal to or less than the result from Equation 2 in Appendix A*	mg/L	daily maximum
Dissolved oxygen*	>= 5.0	mg/L	daily minimum
Undisassociated hydrogen sulfide	<= 0.002	mg/L	daily maximum
pH	>= 6.5 - <= 9.0	Units	see § 74:51:01:07 in WQ.115.20.SD.
Total Suspended Solids	<= 90	mg/L	30-day average
	<= 158	mg/L	daily maximum
Temperature	<= 90	°F	see 74:51:01:31 in WQ.115.20.SD.

* as measured anywhere in the water column of a non-stratified water body, or in the epilimnion and metalimnion of a stratified water body

74:51:01:49. Criteria for Warmwater Marginal Fish Life Propagation Waters.

The criteria for warmwater marginal fish life propagation waters and their allowable variations that are not included under § 74:51:01:55 and Appendix B, unless set under § 74:51:01:24, are as found in the following table:

Parameter	Criteria	Unit of Measure	Special Conditions
Total ammonia nitrogen as N	Equal to or less than the result from Equation 3 in Appendix A*	mg/L	30-day average March 1 – October 31
	Equal to or less than the result from Equation 4 in Appendix A*	mg/L	30-day average November 1 - April 30
	Equal to or less than the result from Equation 2 in Appendix A*	mg/L	daily maximum
Dissolved oxygen*	> 4.0	mg/L	daily minimum October 1 – April 1
	> 5.0	mg/L	Daily minimum May 1 – September 30
	<= 0.002	mg/L	daily maximum

pH	$\geq 6.0 - \leq 9.0$	units	see 74:51:01:07 in WQ.115.20.SD.
Total Suspended Solids	≤ 150 ≤ 263	mg/L	30-day average daily maximum
Temperature	≤ 90	°F	see 74:51:01:31 in WQ.115.20.SD.

* as measured anywhere in the water column of a non-stratified water body, or in the epilimnion and metalimnion of a stratified water body

74:51:01:50. Criteria for Immersion Recreation Waters.

The criteria of parameters for immersion recreation waters and their allowable variations that are not included under § 74:51:01:55 and Appendix B, unless set under § 74:51:01:24, are as found in the following table:

Parameter	Criteria	Unit of Measure	Special Conditions
Dissolved oxygen*	> 5.0	mg/L	daily minimum
Fecal Coliform	≤ 200	/100 mL	geometric mean based on a minimum of 5 samples obtained during separate 24-hour periods for any 30-day period, and they may not exceed this value in more than 20 percent of the samples examined in this same 30-day period
Escherichia coli	≤ 400 < 126 < 235	/100 mL	in any one sample geometric mean based on a minimum of 5 samples obtained during separate 24-hour periods for any 30-day period in any one sample

* as measured anywhere in the water column of a non-stratified water body, or in the epilimnion and metalimnion of a stratified water body

74:51:01:51. Criteria for Limited Contact Recreation Waters.

The criteria of parameters for limited contact recreation waters and their allowable variations that are not included under § 74:51:01:55 and Appendix B, unless set under § 74:51:01:24, are as found in the following table:

Parameter	Criteria	Unit of Measure	Special Conditions
Dissolved oxygen*	> 5.0	mg/L	Daily minimum geometric mean based on a minimum of 5 samples obtained during separate 24-hour periods for any 30-day period, and they may not exceed this value in more than 20 percent of the samples examined in this same 30-day period
Fecal Coliform (May 1 - Sept 30)	$\leq 1,000$	/100 mL	in any one sample geometric mean based on a minimum of 5 samples obtained during separate 24-hour periods for any 30-day period, and they may not exceed this value in more than 20 percent of the samples examined in this same 30-day period
Escherichia coli	$\leq 2,000$ < 630 < 1178	/100 mL	in any one sample geometric mean based on a minimum of 5 samples obtained during separate 24-hour periods for any 30-day period in any one sample

* as measured anywhere in the water column of a non-stratified water body, or in the epilimnion and metalimnion of a stratified water body

74:51:01:52. Criteria for Fish and Wildlife Propagation, Recreation, and Stock Watering Waters.

The criteria of parameters for fish and wildlife propagation, recreation, and stock watering waters and their allowable variations that are not included under § 74:51:01:55 and Appendix B, unless set under § 74:51:01:24, are as found in the following table:

Parameter	Criteria	Unit of Measure	Special Conditions
Total alkalinity as calcium carbonate	<= 750 <= 1,313	mg/L	30-day average daily maximum
Total dissolved solids	<= 2,500 <= 4,375	mg/L	30-day average daily maximum
Conductivity at 25°C	<= 4,000 <= 7,000	micromhos/cm	30-day average daily maximum
Nitrates as N	<= 50 <= 88	mg/L	30-day average daily maximum
pH	>= 6.0 - <= 9.5	units	see 74:51:01:07 in WQ.115.20.SD.
Total petroleum hydrocarbon	<= 10	mg/L	see 74:51:01:10 in WQ.115.17.SD.
Oil and grease	<= 10	mg/L	see 74:51:01:10 in WQ.115.17.SD.

74:51:01:53. Criteria for Irrigation Waters.

The criteria of parameters for irrigation waters and their allowable variations that are not included under § 74:51:01:55 and Appendix B, unless set under § 74:51:01:24, are as found in the following table:

Parameter	Criteria	Unit of Measure	Special Conditions
Conductivity at 25°C	<= 2,500 <= 4,375	micromhos/cm	30-day average daily maximum
Sodium adsorption rate	<= 10		see definition

74:51:01:54. Criteria for Commerce and Industry Waters.

The criteria of parameters for commerce and industry waters and their allowable variations that are not included under § 74:51:01:55 and Appendix B, unless set under § 74:51:01:24, are as found in the following table:

Parameter	Criteria	Unit of Measure	Special Conditions
Total dissolved solids	<= 2,000 <= 3,500	mg/L	30-day average daily maximum
pH	>= 6.0 - <= 9.5	units	see 74:51:01:07 in WQ.115.20.SD.

APPENDIX A to Chapter 74:51:01

Equation 1: For waters where salmonid fish are present.

$$(0.275/(1+10[7.204-\text{pH}])) + (39.0/(1+10[\text{pH}-7.204]))$$

where:

pH = the pH of the water quality sample in standard units.

Equation 2: For waters where salmonid fish are not present.

$$(0.411/(1+10[7.204-\text{pH}])) + (58.4/(1+10[\text{pH}-7.204]))$$

where:

pH - the pH of the water quality sample in standard units.

Equation 3: For waters where early life stages are present.

$$(((0.0577/(1 + 10[7.688-pH])) + (2.487/(1+10[pH-7.688]))) * \text{MIN}(2.85, 1.45 * 10[0.028 * (25-T)]))$$

where:

MIN = use either 2.85 or the value of $1.45[0.028 * (25-T)]$, whichever is the smaller value.

T = the water temperature of the sample in degrees Centigrade.

pH - the pH of the water quality sample in standard units.

Equation 4: For waters where early life stages are absent.

$$(((0.0577/(1 + 10[7.688-pH])) + (2.487/(1 + 10[pH-7.688]))) * 1.45 * 10[0.028 * (25-\text{MAX}(T,7))])$$

where:

T = the water temperature of the sample in degrees Centigrade.

pH = the pH of the water quality sample in standards units.

MAX = use either the water temperature (T) for the sample, or 7, whichever is the greater value.

Appendix 13-7

Table of Violations of Drinking Water Standards and Other Situations Requiring Public Notice
[Deleted February 2005]

REPORT DOCUMENTATION PAGE

*Form Approved
OMB No. 0704-0188*

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1. REPORT DATE (DD-MM-YYYY) February 2010			2. REPORT TYPE Final		
4. TITLE AND SUBTITLE The Environmental Assessment and Management (TEAM) Guide: South Dakota Supplement			5. FUNDING NUMBERS AEC: MIPR 0010005589 ANG: F9WFEV0028G001 NGB: W45XMA00130245 Commerce: 1301-09-SA00110 Army Reserve: MIPR10C0DCD201 USACE: 96x3123 DHS: HAHQDC-09-X-00436 DLA: MIPR SP1001090 USPS: MOA-05-CERL-01 State Department: IAG F3NF369350G002		
6. AUTHOR(S) Carolyn O'Rourke and Patricia A. Kemme			7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Engineer Research and Development Center (ERDC) Construction Engineering Research Laboratory (CERL) PO Box 9005 Champaign, IL 61826-9005		
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) See the report Preface for a complete list of the sponsors.			8. PERFORMING ORGANIZATION REPORT NUMBER ERDC/CERL SR-05-36 Revised February 2010		
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			10. SPONSOR/MONITOR'S ACRONYM(S)		
13. SUPPLEMENTARY NOTES Original document prepared by CERL. Copies are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 or can be downloaded from the HQ AFCEE or CERL (DENIX) bulletin boards. Supersedes USACERL SR-95/50 and all its revisions.			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
14. ABSTRACT Environmental assessments help determine compliance with current environmental regulations. The U.S. Air Force, U.S. Army, Defense Logistics Agency (DLA), and Corps of Engineers (Civil Works) have adopted environmental compliance programs that identify compliance problems before they are cited as violations by the U.S. Environmental Protection Agency. Since 1984, the U.S. Army Construction Engineering Research Laboratory, in cooperation with numerous Department of Defense (DOD) components, has developed environmental compliance assessment checklist manuals. The Environmental Assessment and Management (TEAM) Guide was developed for use by all DOD components. Currently there are five participating DOD components: the Air Force, Air National Guard, Army, Civil Works, and DLA. These agencies have agreed to share the development and maintenance of this Guide. The Guide combines Code of Federal Regulations and management practices into a series of checklists that show legal requirements and the specific operations or items to review. TEAM Guide is supplemented by DOD component-specific manuals detailing DOD component regulations and policies. The South Dakota Supplement was developed to be used in conjunction with the TEAM Guide, using existing South Dakota state environmental legislation and regulations as well as suggested management practices.					
15. SUBJECT TERMS Environmental Compliance Assessment and Management Program, environmental compliance checklists, The Environmental Assessment and Management (TEAM) Guide, environmental compliance laws and regulations					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT SAR	18. NUMBER OF PAGES 366	19a. NAME OF RESPONSIBLE PERSON Carolyn O'Rourke
a. REPORT Unclassified	b. ABSTRACT Unclassified	c. THIS PAGE Unclassified	19b. TELEPHONE NUMBER 217-398-5553		